

2013 University of Florida Research and Extension and Florida A&M University Extension Combined Plan of Work

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I. Plan Overview

1. Brief Summary about Plan Of Work

This summary provides the long range plans for the University of Florida 1862 Research and Extension programs, and the Florida A& M University 1890 Extension program (in that order) through 2016. However, it should be noted that the Florida Cooperative Extension service is undergoing a long-range planning process in 2011 and changes may be made to this POW early in 2012-2013 in order to update this plan. The Florida land-grant universities identify the needs of their constituents through grass roots approaches that include direct interaction with stakeholders within their communities, the use of advisory committees and through focus teams. Representatives of many underrepresented and under-served target audiences are contacted and questioned through surveys, direct contact and in groups. This ability to interact at the grassroots level is a unique part of the land-grant mission and both FAMU/CESTA and UF/IFAS use this process consistently to identify the most critical needs. These primary needs through 2015 are listed below:

1862 Research

UF/IFAS Research Roadmap

The vision for Florida's 1862 Research is integrated into a three-part multidisciplinary approach that encompasses production agriculture, natural resources and a human dimension. These three areas include much of what Florida sees as critical areas that require cutting edge research to find the best solutions for Florida and the people of Florida.

Production Agriculture

Research has identified five multi-disciplinary program groups within production agriculture that are of vital importance in Florida:

1. Enhance sustainability
2. Respond to and integrate with changes in climate and agro-ecosystems
3. Ensure food safety and security
4. Enhance, collect and preserve germplasm
5. Develop renewable resources.

Natural Resources

The overarching goal for Natural Resources is to enhance the economic, environmental and social sustainability of natural resources. IFAS scientists from individual disciplines are well-positioned to come together to answer complex questions through an integrated approach using whole systems analysis. Most challenges demand a multi-disciplinary approach and a new science of synthesis and integration. Five critical areas to focus on in this framework are:

1. Ecosystem health and services
2. Climate change
3. Renewable energy
4. Water resources
5. Resource production.

Human Dimensions

Human dimensions are woven throughout the fabric of IFAS research programs, sometimes as stand-alone research projects, and sometimes as an integral part of multi-disciplinary research projects and programs. As problems facing agriculture and natural resources become more complex, multi-disciplinary approaches are a necessity and are more and more being demanded by funding agencies.

Five areas for establishing multi-disciplinary research efforts within IFAS were identified

1. Land, air, water use
2. Food systems
3. Climate change
4. Energy
5. Humans

There are commonalities among the three multidisciplinary areas identified by research. These commonalities also include the five NIFA project priorities.

Commonalities:

- Ecosystem health and services
- Resource production
- Water
- Sustainability
- Food Systems

Commonalities specific to NIFA priorities:

- Global Food Security and Hunger
- Climate Change
- Sustainable Energy
- Childhood Obesity
- Food Safety

1862 Extension

Extension: Preparing for Challenges and Changes of the 21st Century

Long-range planning is a process by which we envision our future and the challenges and changes facing us over the next four years. It also is a time for us to reflect upon our purpose, vision, and strategies for carrying out our mission. In examining our past while envisioning our future, we can better determine how well-prepared we are to help the people of Florida cope with challenge and change. Because we live in a changing world, our preparation also must include the challenges and changes of the global economy.

As the extension educational arm of the University of Florida's land grant mission, we have a rich history of

- grassroots involvement in the determination of educational priorities;
- the use of volunteers in educational programs, initiatives, and projects;
- collaborative relationships within and between state partners;
- application of knowledge for problem solving.

Because of our commitment to grassroots involvement, the Extension long-range planning process must reach out to the community. The valued perspectives that result when stakeholders, county extension advisory committees, traditional and potential audiences and Extension faculty come together will help us translate Extension's purpose, vision, and strategies for carrying out our mission into tangible future programs that address economic, environmental and life quality issues facing individuals, families and communities.

Since no organization can be all things to all people, particular focus will be directed toward issues, problems, and/or concerns that affect people involved in agriculture; aquatic, coastal and aquaculture programs, natural resources and the environment, youth development, family and consumer sciences, energy and housing, and community. Extension has developed seven goals areas in which to focus:

- Enhancing and maintain agricultural, natural resources, and food systems
- Maintaining, conserving, and enhancing Florida's natural environment
- Developing responsible and productive youth through 4-H and other youth programs
- Creating and maintain resource efficient landscapes: The smart way to grow

- Promoting individual, family, and community well-being and economic security
- Maintaining, enhancing, and establishing sustainable communities
- Promoting professional development to enhance organization efficiency and effectiveness

To further focus Extension has also identified five programs within these goals that are also identified as NIFA national program priorities. These five areas include:

- Global Food Security and Hunger
- Climate Change
- Sustainable Energy
- Childhood Obesity
- Food Safety

1890 Extension

Extension: Solutions for Florida Citizens

Although Extension in Florida is made up of a close collaboration between the 1862 UF/IFAS Extension and the 1890 FAMU/CESTA Extension (and together they are the Florida Cooperative Extension Service) they will be reported separately as much as possible to provide a clearer picture of the strong programs and impact each college has on Florida and its citizens.

The Cooperative Extension Program is the outreach arm of the College of Engineering Sciences, Technology and Agriculture (CESTA) at Florida A&M University (FAMU). Through the history of FAMU, countless residents in the North Florida region have been enriched through the positive impact of significant information shared by specialists and agents through the Cooperative Extension Program. Reaching out to serve farmers, rural and urban families, elderly, youth, entrepreneurs, small business owners, and underserved communities continues to be a rich tradition of the FAMU Cooperative Extension Program.

FAMU has also just completed a formal strategic planning as a follow up to the diversity/teambuilding training conducted earlier in the year. From these discussion the following mission, vision and goals for the immediate future were adopted:

MISSION

Florida Agricultural and Mechanical University Cooperative Extension Program is the outreach arm that provides research-based educational information and technical assistance to improve the quality of life for our clientele.

VISION

To be a cohesive, mission-oriented unit working to deliver high quality programs to our clientele while maintaining high standards.

FAMU overall Goals:

Address National Institute of Food and Agriculture's 5 priority areas by incorporating them into Florida Agricultural and Mechanical University's Cooperative Extension Program.

Develop specialized educational and enrichment activities designed to attract and retain youth involvement in agriculture and related sciences.

Create a model agricultural environment that demonstrates best production and management practices.

As part of the total Cooperative Extension program in Florida, The FAMU Cooperative Extension Program provides research-based educational information and direct technical assistance to improve the quality of life for limited resource citizens in 18 counties in Florida. As a unit of the Florida Cooperative Extension Service, the program is responsible for coordinating activities and events of mutual benefit with the University of Florida/Institute of Food and Agriculture Sciences (IFAS).

Florida citizens in the following 18 counties are served by extension faculty and staff in the FAMU Cooperative Extension Program: Bay, Calhoun, Columbia, Gadsden, Gulf, Hamilton, Jackson, Jefferson, Leon, Liberty, Madison, Manatee, Suwannee, Wakulla, Duval, Hillsborough, Orange, and Escambia.

Working with the 1862 Extension program FAMU is also an important part of the statewide Extension focus and serves on the statewide focus teams along with UF/IFAS. Their goal areas are identical although their focus may differ slightly based on the college mission and vision. These goal areas include the following:

- Enhancing and maintain agricultural, natural resources, and food systems
- Maintaining, conserving, and enhancing Florida's natural environment
 - Developing responsible and productive youth through 4-H and other youth programs
- Creating and maintain resource efficient landscapes: The smart way to grow
- Promoting individual, family, and community well-being and economic security
- Maintaining, enhancing, and establishing sustainable communities
- Promoting professional development to enhance organization efficiency and effectiveness

Although UF/IFAS Extension and FAMU/CESTA Extension work to reach these goals on integrated focus teams, the priorities of each university may differ slightly. Some specific focus areas for the 1890 program include:

- 4-H and youth development
- Bioterrorism awareness
- Community resource and economic development
- Family resource management
- Herd health
- Marketing and small farm outreach
- Statewide small farm education
- Water quality and environmental education

FAMU/CESTA Extension has identified focus areas that are also NIFA program priorities:

- Food safety (Human and animal)
- Global food security and hunger
- Climate change
- Sustainable energy
- Childhood obesity

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2013	345.0	27.0	90.0	0.0
2014	345.0	27.0	90.0	0.0
2015	345.0	27.0	90.0	0.0
2016	340.0	27.0	120.0	0.0
2017	325.0	25.0	90.0	0.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- Internal University Panel
- Expert Peer Review

2. Brief Explanation

Florida Peer and Merit Review Process

Prior to the initiation of any research project that will be wholly, or in part, funded by federal formula funding, the designated review coordinator (or, in the case of some multi-institutional, regional or multi-state projects or programs, the administrative advisor) will call for a peer review of the proposed research project. Biennially, Extension state-level programs (Goal/focus areas) that will be wholly, or in part, funded by federal formula funding, will undergo a merit review. If significant changes are made to the structure of the state-level program during the off year, the designated administrative advisor may call for a merit review of the state-level program. A minimum of three peer scientists (i.e., individuals qualified by their status in the same discipline, or a closely related field of science) will be selected to read and provide written comments to the appropriate administrator on the proposed project. A minimum of three peer Extension faculty affiliated with a state-level goal or focus area will be selected to read and provide comments to the appropriate program leader, goal and focus team leaders and review coordinator.

The terms of reference for the reviewers will focus their attention on questions of the quality of the proposed science, technical feasibility of the research project or extension program, the validity of the approach, and the likelihood for completing the stated objectives. Other equally important comments will include relevance to the state's priorities, the degree of integration between extension and research (as appropriate), responsiveness to stakeholders identified critical need areas, and the accuracy of any claims for multi-disciplinary, multi-institutional and multi-state collaboration.

Peer and Merit reviewers may be selected from the same campus or from another institution or organization at the discretion of the research and/or Extension dean(s), or by their delegated authority. FAMU Extension faculty are members of the Extension goal and focus teams and their involvement in merit review may be considered external to the process although within the state they are considered to be equal members on the goal and focus teams. Consideration will be given to the expenses associated with the reviewing individual proposal in the selection of reviewers. Additional consideration will be given to appointing reviewers who are without any apparent conflicts of interest and who are without personal or professional bias. Consideration may also be given in selecting reviewers that can protect confidential business information. The anonymity of the reviewers will not be preserved except in very special circumstances.

Extension reviewers may be asked to complete their reviews electronically via polycom or at an online website located at <http://pdec.ifas.ufl.edu/meritreview>. Reviewers will be asked to present their findings in either paper or electronic format, and records of the peer reviewers comments will be preserved for the life of the project, or for a period of three years in the event that a project is not initiated. Extension results from the merit review will be held for a period of five years. Document storage of all materials related to the Peer and Merit Review will be paper and/or electronic.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Planned programs address the critical issues of strategic importance in several ways including integration between research and Extension and through collaboration and cooperation between states and regions.

Following each five year long range planning cycle which involves input by stakeholders from the grassroots to the state and national level, critical needs are identified, prioritized and separated into seven manageable goal areas. Critical issues requiring research are provided to research for further discussion and action.

In Extension goal teams are developed around these critical need areas. Critical issues are further divided into three to five focus teams related to each goal area. Presently Extension has a total of seven goal areas and 28 focus teams. These focus teams lead the statewide effort to find and implement solutions to the critical issues. These teams include faculty with research, teaching and Extension appointments. Both UF/IFAS and FAMU/CESTA faculty are included on these teams as well as some ag commodity and industry representatives. As specialists in these focus areas their responsibility is to identify both problems and solutions. They will design a logic model of this information that can be used as a road map by any faculty in the state working in these critical areas.

Besides obtaining critical need issues from Extension research also works closely with stakeholders, regulatory agencies and international agencies to monitor other issues and critical needs that have been revealed as problems or potential. Projects are then developed that may be state, regional, national or international in composition.

Extension uses the scientific based results of research as they plan programs. Extension also works with other states in developing multi-state programs. One highlight are the yearly multi-state meetings held in the panhandle area of Florida between Florida, Alabama and Georgia. Several other states have expressed a desire to be involved. As can be seen, all of Florida's Extension programs and many research projects related directly to critical issues identified by stakeholders.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

As part of the strategic plan, Research at the 1862 and Extension at both the Florida 1862 and 1890 land-grant colleges identify under-served and under-represented clientele. Issues are identified both by these populations and by organizations and services that work with and for them. Through this process Florida is aware of whether these issues are county specific or state-wide. Extension Focus teams are provided with all of this information before they begin to design state-wide programs. Target audiences are identified as part of this process and special emphasis is placed on including under-served and under-represented populations in finding the best research-based solutions to critical issues.

3. How will the planned programs describe the expected outcomes and impacts?

In Extension, as part of the program planning process state outcomes and impacts are developed by Extension focus teams to be used by all Extension faculty across the state. This allows for the collection of data that can be state aggregated. Outcomes and impacts may be measured and described in a multitude of ways. Some outcomes are obtained through qualitative or quantitative measures. Case studies identify others. Some outcomes are provided through observation.

Research and both UF and FAMU Extension identify objectives and potential outcomes at the time the research project or goal and focus plan of action is developed and approved. For both Extension and research the expected outcomes and impacts described are based on the critical issues and situation surrounding the critical issues that have been identified.

4. How will the planned programs result in improved program effectiveness and/or

The planned programs as they relate to integrated and multi-state activities result in improved program

effectiveness and efficiency through:

- The development of better solutions through the integration of research and extension
- A broader knowledge base
- A wider network of human resources
- A wider more diverse audience reached
- Less time spend by individual faculty in developing and implementing programs

IV. Stakeholder Input

1. Actions taken to seek stakeholder input that encourages 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.

The strategic planning committee and the Extension and Research advisory committees help to identify ways to encourage participation in long range planning. The strategic planning committee was composed of county and state faculty with research, extension and teaching appointments. There was also professional staff included who have experience in strategic planning. This committee laid out a list of stakeholders and stakeholder groups who needed to participate. The research advisory committee also includes agriculture commodity and industry leaders who were able to provide additional input.

District directors, county extension directors and educational research and extension center directors from around the state were also asked to provide names of stakeholders or organizations that needed to be included in identifying critical issues. The entire process used by Florida for the

Extension Strategic Plan can be found at <http://pdec.ifas.ufl.edu>.

2(A). A brief statement of the process that will be 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.

Involving People in Long-range Planning

Florida Extension uses a long-range planning process that includes a series of listening sessions conducted with a variety of individuals and groups. Participants of these listening sessions are asked to help translate Extension's purpose, vision and strategy into identified critical issues for which tangible future results can be developed and implemented. In support of that task, listening sessions are conducted with the following groups:

1. Target audiences of Extension programs (both current and potential). This group of ultimate users must find relevance in our products and services or they will not use them. One way to insure relevance of purpose and direction of our educational programs is to ask those for whom such programs are targeted.

2. Extension advisory committees. Individual committee members who understand both the Extension program development process and the needs and concerns of their community can be a most valuable asset. In addition, their involvement in planning can foster greater commitment to programs they help develop.

3. Research, Teaching and Extension faculty. One of the long-standing missions of the Florida land-grant universities is to enhance economic well-being and quality of life of those the University of Florida and Florida A& M University are charged to serve. Keeping people abreast of current and emerging research and the educational experiences resulting from adaptations of that research is crucial to this mission.

4. Stakeholders of local, state and national priorities. Stakeholders (external and internal) play a key role in providing financial and other support for Extension programs. Listening sessions provide an opportunity to both obtain their input and make them aware of effective programs and changes/challenges that may impact Extension.

County Listening Sessions

The input from targeted audiences, stakeholders and County Extension Advisory Committees will be collected through listening sessions conducted within each county and sponsored by the County Extension Advisory Committee. Local citizens who are knowledgeable of the community's important features, changes impacting it and what the community values will be invited to participate in their county's listening session. The purpose of each listening session is to develop a community vision that begins with answers to the following questions:

1. What do we value about our community?
2. What trends and issues are impacting what we value?
3. If current directions persist, is this where we want to go? If not, are there local resources that can best address each trend or issue?
4. Of those issues and/or concerns that can best be addressed through the expertise of Extension educators, what priority should be placed on each issue or concern?

2(B). A brief statement of the process that will be 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.

Florida is in the middle of a long Range Planning Process. Florida's strategic plan has included listening sessions in all 67 counties along with holding focus teams within industry and businesses and organizations across the state. Each County office also has an advisory committees made up of individuals who are aware of the needs of their communities and who have been intimately involved both in the strategic planning process and as participants. These needs are filtered through Extension Focus teams. Each focus area team is in turn composed of state and county faculty from the Florida 1862 and 1890 Extension institutions. Many focus teams also have industry leaders in their membership. Goal and Focus teams meet annually to review results from the merit review, statewide results and information gleaned from industry, government, advisory committees, and representatives of the underserved and under-represented. This information is then used to update each focus team plan of action to reflect stakeholder input.

3. A statement of how the input will be considered

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

Brief explanation.

Both 1862 and 1890 Extension and 1862 Research will use the information obtained through stakeholder input to identify critical need priorities. In the most recent long range planning Extension identified over 800 need specific needs. Some of these were county specific and some require state-wide attention. Emerging issues also become obvious and are discussed by teams in each state-wide focus area as well as at the county level. Once priorities are identified administration and faculty are able to identify needs as short term, intermediate and long term.

Once needs are identified both research and Extension are able to prioritize and redirect programs as needed. The process can be found at http://pdec.ifas.ufl.edu/team_review/. For example over the past few years it became obvious that a department dealing with poultry was no longer needed while at the same time almost every county has emerging issues related to community development and sustainability.

Priorities also identify the need for additional faculty and staff in specific areas where research or educational programs are required. These needs affect the budget and are taken into consideration as increase revenue is requested. Input collected will be used to:

- Identifying emerging issues
- Redirect Extension programs as critical issues change
- Identify cutting edge research projects as critical areas evolve and change
- Set new priorities based on findings

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger
2	Maintain, Conserve and Enhance Florida's Natural Environment
3	Develop Responsible and Productive Youth Through 4-H and Other Youth Programs
4	Create and Maintain Resource Effective Landscapes: The Smart Way to Grow
5	Promote Individual, family, and community well-being and economic security
6	Maintain, Enhance and Establish Sustainable Communities
7	Families, Youth. and Communities--research
8	Program and Project Support, and Administration, Education, and Communication--research
9	Global Food Security and Hunger--Research
10	Climate Change
11	climate Change--research
12	Sustainable Energy
13	Sustainable Energy--Research
14	Childhood Obesity
15	Childhood Obesity--Research
16	Food Safety
17	Food Safety--Research

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

2. Brief summary about Planned Program

Planned programs relate to:

- Agricultural profitability and sustainable use of environmental resources;
- Awareness of agriculture's importance to an economy that ranges from local to global
- Processing, distribution, safety and security of food systems
- Protecting Florida from existing and emerging pests and diseases
- Bio-energy-sustaining and Fueling Florida.

Some of the major commodity areas found in Florida include:

- Agronomic row crops
- Animal sciences and forages
- Aquaculture
- Citrus
- Forestry
- Fruits and Vegetables
- Ornamentals and Turf
- Small Farms and Alternative Enterprises (including small crop profitability)
- Sugarcane and Rice
- Small animal production (including goat)

Florida's agriculture and natural resources industry comprises a wide array of economic activities. This industry represents numerous value-added stages, including production, processing, wholesale distribution, retailing, and associated inputs and services. Some of the major production groups are fruits and vegetables, livestock, meat and dairy, forestry, environmental horticulture, seafood, and sugar. In addition, a variety of input and service businesses provide critical supporting roles. In 2003, the agriculture and natural resource industry generated over 50.8 billion dollars of output or sales impacts, \$27.6 billion in exports, \$2.6 billion in tax contributions and 756,993 jobs that provided \$25.1 billion in labor income.

These economic benefits are felt at local, state and international levels. In some rural counties, agriculture is the largest component of the economy. Much of Florida's agricultural produce is exported outside the state, contributing to a \$1.5 trillion national agricultural economy. In addition to economic contributions, these industries provide the state with various non-monetary benefits, such as wildlife habitat, aquifer recharge areas and areas of open space. These environmental attributes also support the state's large eco-tourism industry. Surveys indicate that over 50 percent of Florida visitors engage in some form of nature-related activity.

According to Lyons (2006), a large and growing number of Floridians are unaware of the numerous contributions of the state's agricultural industry. Rapid population growth places increasing pressures on land, water and environmental quality. As a consequence, the agricultural sector continues to be challenged for resources including land, water, labor, and other farm inputs.

Food processing, service, preparation, and distribution are all vital activities that support the people of Florida and the state's agricultural industry. New and value-added product development contributes to a viable market for Florida products and provides for the array of products consumers expect. Effective distribution systems also enhance the state's ability to compete effectively in the domestic and global marketplace.

Food safety and security are critical components of a sustainable industry. According to the

Centers for Disease Control and Prevention (CDC), there are over 250 known different food borne diseases. These diseases are caused by viruses, chemicals, toxins, and fungi, as well as bacteria which are the major source of illness. In the United States, where the food supply is one of the safest in the world, it is estimated that there are 76 million incidences of food borne illness and approximately 5,000 deaths yearly.

These issues surrounding safety and security span the entire food sector, ranging from consumers to the food service and processing industries. Increasingly, food safety and security are a focus of government, industry, media and consumer awareness. The need for accurate, easy to understand, accessible information is paramount to the success of the entire industry and the health and welfare of the entire population.

Plant, animal, and human protection is becoming increasingly important as Florida's urban areas continue to grow rapidly and the more isolated farm population shrinks. The extension community is helping to provide this protection through partnerships across the continuum from farmers to households, including researchers, extension agents, agricultural producers, Master Gardeners, and Doctors of Plant Medicine. The mech

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

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 (Situation and Scope)

1. Situation and priorities

Situation Statement

The scope of challenges facing agriculture and natural resource industries of Florida fall into four primary areas:

- 1) economic well-being,
- 2) environmental issues,
- 3) quality, safety and security issues, and
- 4) civic engagement.

Economic Well-Being includes:

- Declining profitability due to stable or falling commodity prices and increasing cost of production and Liberalized trade agreements that reduce tariffs and subsidies can benefit both foreign and domestic producers by having greater access to markets.
- Resource limitations resulting from land loss due to urban sprawl, increased water consumption due to population growth, restricted use of farm inputs due to environmental concerns, and reduced availability of labor due to a growing reliance on migrant labor.
- New and innovative products and processing technologies must be developed for the industry to remain competitive and to adequately meet the rising expectations of consumers.

Environmental issues focus on:

- Public concern over environmental issues that have translated into increasingly stringent and costly environmental regulations on certain agricultural practices which can adversely affect economic viability in the short run and sustainability in the longer run.
- Water quality, as impacted by agricultural production practices, such as fertilizer and pesticide residue leaching and runoff, and management of waste from livestock and aquaculture production,
- Water availability as impacted by production-related surface and groundwater withdrawals, Conservation of the state's natural resource base, including land for production, wildlife habitat, green space, and fresh and saltwater recreation.

Quality, Safety and Security Issues in Florida Extension include:

- A heightened awareness by agricultural producers and processors concerning safe production practices such as chemical residues, biological safety concerns, and personal hygiene practices.
- Continued development of modern processing, distribution and storage, technologies and the use of improved handling practices that prevent unnecessary food losses while simultaneously ensuring high quality and safety standards;
- Availability of a wide range of wholesome foods that meet the needs of an increasingly unhealthy population;
- At the retail sector, adequate packaging and labeling so that consumers have reliable information to optimize their food choices;
- Development and implementation of food safety and security programs that protect the nation's food supply, and;
- Providing adequate information to the state and country's farm laborers who support agriculture to help them avoid dangers from equipment and exposure to farm chemicals that pose a number of potential risks to their health and safety.

Civic Engagement incorporates:

An awareness of agriculture and natural resources and their contribution to the state's economic, environmental, and social well-being. Agricultural awareness efforts can create an informed voting public so that wise choices can be made that benefit Florida's citizens and visitors. The scope of these issues includes:

- Educating the public regarding the role and importance of agriculture in Florida's economy, the

stewardship of natural resources, and the relationship between agricultural production and food availability.

- Keeping legislators up-to-date on industry concerns, such as pesticide regulations, worker protection standards, immigration, and international trade.
- Providing public interest groups and the media with objective information regarding the contributions of the agricultural industry,
- Developing information and programs that educate the industry regarding new information on such topics as Best Management Practices, regulatory legislation, and technological advancements.
- Assisting the industry to promote the numerous benefits of agriculture.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

- People will be motivated by workshops and other educational activities to learn/change
- Information on best practices shows that these approaches work well for these target audiences

- Changes suggested in activities related to this program will improve quality of life for participants

2. Ultimate goal(s) of this Program

Identify educational programs that increase food security.
 Identify educational programs that decrease global hunger.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	80.0	11.0	0.0	0.0
2014	80.0	11.0	0.0	0.0
2015	80.0	11.0	0.0	0.0
2016	126.1	11.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 (telephone calls) 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension • Other 1 (radio)

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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 Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 7

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 8

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 9

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. Florida also has five international airports and a sixth one opening in May 2010 in West Florida. Florida also has well over 53 million tourists visiting annually from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Maintain, Conserve and Enhance Florida's Natural Environment

2. Brief summary about Planned Program

Maintaining and enhancing Florida's environment looks specifically at:

- improve and protect water resources
- Sustainable use of freshwater and terrestrial natural resources and ecosystems
- Provide environmental education
- Sustainable use of coastal and marine ecosystems
- Provide knowledge related to Climate variability and change

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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 (Situation and Scope)

1. Situation and priorities

Situation Statement

Florida depends heavily on a healthy and sustainable environment. For example, freshwater is a critical resource for agriculture, industry, natural systems, tourism, and the health and convenience of all Floridians. From another view, Florida is a saltwater state. Its estuarine, coastal and marine systems stretch further than all the other Atlantic states from Georgia to New England, and they produce over \$5 billion in fisheries and wildlife resources each year, buffer coastal areas from storms, absorb pollutants and provide amenities for coastal settlement, trade and tourism, including over 1 million boaters and divers per year. Terrestrial and freshwater flora and fauna also contribute significantly to Florida's economy and the quality of life enjoyed by residents and tourists. People recognize the value of their environment. For example, prevention of water pollution, protecting the marine environment, and conservation of wildlife habitat and endangered species were rated as high priority educational issues by 72%, 64% and 50% of respondents to a 1999 survey. As shown by this survey, there is an opportunity and need to inform and educate Floridians about their environment.

The sustainability and health of Florida's environment is under pressure from a range of human activities. For example, Florida's water supply is currently sufficient, but experts predict that the 700 new residents arriving in Florida each day will increase demand to 9.3 billion gallons per day by 2020. This increase will put severe pressure on the state's water and other natural resources. The number of people living in Florida also increases potentially damaging inputs that enter coastal waters via watersheds and runoff. For example, household pesticide use is one factor that leads to five of Florida's estuaries being among the ten U.S. estuaries most threatened by pesticides. Historical losses of 50% of the salt marsh, 60% of the seagrass, and 85% of the mangroves in some of Florida's estuaries also need to be repaired. In addition, Florida ranks third among states in the number of plants and animals federally listed as being in danger of becoming extinct, and half of all Florida's non-marine vertebrates are declining in number. Successful management of these threats will require raised awareness, widespread distribution of useful information, suitable skills, and the demonstration of alternative behaviors that can ensure the quality and quantity of Florida's natural resources.

The overall objective of this Goal is to sustain or enhance Florida's environment by increasing relevant knowledge and by motivating citizens, professionals, and agency personnel to take actions that reduce impacts on these valuable resources. The primary impact of this work will be increased efforts to apply sustainable management in Florida. This impact hinges on promoting increased awareness and understanding of ecological, economic, social and management principles and processes among citizens, professionals, and agency personnel. Tangible results include an increased involvement of citizens in monitoring and management, an increased use of key ecological concepts in discussions held by state and federal management agencies, and an increased awareness and use of adaptive and participative management. Programs that improve the skills and resources available to environmental educators also represent critical elements in achieving these objectives.

Environmental Education

Key issues: Florida's natural resources, both land and water-based, are continually being threatened by growth and development. Florida citizens need high quality, engaging environmental education (EE) programs that promote awareness, understanding, and conservation of our natural resources. For best impact, EE programs must be based on sound science, proven educational methodologies, and make use of today's educational technologies. This requires that EE educators receive high quality training opportunities in program planning, implementation, and evaluation.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

- People will be motivated by workshops and other educational activities to learn/change
- Information on best practices shows that these approaches work well for these target audiences
- Changes suggested in activities related to this program will improve quality of life for participants

2. Ultimate goal(s) of this Program

- Improved management systems, procedures, and/or techniques to improve water conservation
- Improved management systems, procedures, and/or techniques to maintain or improve water quality
- Increase understanding of Florida's coastal and marine environment
- Improved procedures and techniques to reduce environmental impact from human activity
- Improved compliance with local, state and federal regulations
- Improved procedures and techniques to deliver environmental education
- Change behaviors that impact environmental quality
- Develop skills required for effective critical thinking, problem solving and decision making
- Improved skills for developing service learning and other community engaging activities
- Improve agricultural and environmental knowledge/skills
- Increase understanding of how Florida's natural resources ecosystems and how they respond to human activity

Environmental Education

GOAL – To promote environmental literacy among Florida's citizens.

OBJ 1: Increase knowledge and skills in planning, implementing, and evaluating EE programs. (This includes training, curriculum design, distance education, teaching methods, etc.) (Audience - Educators, Extension faculty, Adult volunteers) (See Needs 1)

OBJ 2: To increase understanding and awareness of basic EE principles /core concepts – promote environmental literacy (Audience – ALL) (See Needs 2)

OBJ 3: To increase civic and community engagement in solving locally-based environmental issues (Audience - Volunteers, Residents, Youth, Local governments) (See Needs 3)

OBJ 4: To increase environmental literacy in youth through life skill building EE experiences.

(Audience - Youth)

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	20.0	1.0	0.0	0.0
2014	20.0	1.0	0.0	0.0
2015	20.0	1.0	0.0	0.0
2016	35.0	1.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention ● Demonstrations ● Other 1 (telephone calls) 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (radio)

3. Description of targeted audience

Extension faculty and staff

Formal/non-formal educators

Volunteers and Youth

Residents /visitors

Local governments

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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 Target

Change in Knowledge Water Resources

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in Behavior Water Resources

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in Condition Water Resources

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

Change in Knowledge Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

Change in Behavior Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

Change in Condition Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 7

1. Outcome Target

Change in Knowledge Environmental Education

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 8

1. Outcome Target

Change in Behavior Environmental Education

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 9

1. Outcome Target

Change in Condition Environmental Education

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 10

1. Outcome Target

Change in Knowledge Sustainable Use of Coastal and Marine Ecosystems

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 11

1. Outcome Target

Change in Behavior Sustainable Use of Coastal and Marine Ecosystems

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 12

1. Outcome Target

Change in Condition Sustainable Use of Coastal and Marine Ecosystems

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 135 - Aquatic and Terrestrial Wildlife

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. These cities all have international airports. Along with this we have over 53 million tourists visiting from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

Changes in state, county and federal appropriations can also affect the outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

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

2. Brief summary about Planned Program

Developing responsible and productive youth through 4-H and other youth programs relates specifically to areas including:

- Life skills developed in youth through subject matter experience
- Organizational strategies and learning environment to support youth programs
- Volunteer development and systems to support youth

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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 (Situation and Scope)

1. Situation and priorities

Life skills Developed in youth through subject matter experience

To "develop marketable/productive skills for work and family life" has been cited by Connell, Gambone, and Smith (2000) as a major outcome for positive youth development. Learning to be productive; do well in school; develop positive outside interests and acquire fundamental life skills for work; and family life is a basic transition from youth to adulthood.

4-H uses a variety of project skills to engage youth in areas of interests to not only acquire new skills but become the "vehicle" through which youth engage with other adults, engage in self-directed learning, setting goals, making independent choices, and decisions, and gaining a sense of mastery and accomplishment from their experiences. This allows individuals to make informed decisions with a better understanding of long and short-term consequences of their choices and impact on others. The purpose of this program is to build positive support in the community for the 4-H program, while involving more youth and volunteers.

Research studies indicate that the more internal assets and life skills/competencies youth build the more likely they are to grow up healthy, confident and responsible and less likely to become involved in risky behaviors. Active participation in 4-H helps youth develop their assets and life skills. Participation helps to develop assets no matter the delivery mode: community clubs, 4-H in the classroom programs, residential camps, day camps and events/activities.

There is mounting evidence that effective approaches to skill development are sequential, active, focused and explicit (Durlack and Weissber, 2007) and that programs that do so benefit youth in multiple ways.

Previous research provides evidence that 4-H youth who become engaged in the multiple opportunities and experiences through the local club, county, district and state levels of programs provide the ladder for youth to excel through sequenced, active, focused and explicit experiences for skill development. It is these beyond school experiences, planned and executed effectively that provide the learning opportunities for youth to practice and be actively engaged in their learning environments.

Organizational Strategies and Learning Environments for Youth Programs

Sustaining and structuring a quality youth development program requires professional and organizational development including: affirmative action, awards and recognition, marketing, risk management, financial management, and collaborations & partnerships) Florida 4-H programs educate over 260,000 youth enrolled in programs in all 67 counties, the Seminole Tribes, and military bases in Florida, Europe, and Cuba, reaching youth 5-18 years of age. This is done in a variety of delivery methods. These methods include residential/day-camping, advisory committees, afterschool, 4-H in the classroom, 4-H Clubs, military 4-H partnerships, and 4-H expansion and review committees. Research indicates that "youth involvement in structured activities after school can be a productive use of time, and can positively impact academic achievement, self-esteem, civic engagement, and relationships with others." (Cooper, Valentine, Nye, & Lindsay, 1999; Eccles & Barber, 1999; Youniss & Yates, 1997)

Based upon a 2007 analysis of county government priorities, organizational strategies and learning environments may address the following priorities: (1) preserving desired quality of life and cultural amenities, (2) developing the workforce of the future, (3) improving work force performance, (4) water and energy conservation, (5) environmental education in school, (6) promoting self reliance and independence, (7) encouraging community diversity and harmony, (8) improving education at all levels in community, (9) improving personal health and safety, (10) to be accessible, (11) enhance community engagement and awareness of resources.

-It is important to position the 4-H organization and its volunteers to work with and on behalf of young people in their communities.

Volunteer Development and Systems to Support Youth

Volunteers are an essential component of Extension Youth Development Programs (Patton, 1990)

-Volunteers structure the group learning experiences for youth (4-H Program Handbook, 1999)

-More than 50% of the life skills developed by youth are attributed to volunteers (Fogarty et al, 2008)

-Volunteers serve in a variety of capacities in support of 4-H members, other volunteers, and the 4-H program in general.

-Youth have the potential to succeed, but... the likelihood of success is greatest when youth regularly

experience positive adult interaction and mentorship and are involved in youth development programs" (Learner, 2007).

-Volunteer positions will identified

Potential volunteers will be screened and selected

-Volunteers will be oriented and

trained in youth development, organizational culture and strategies, recognition, youth project study areas, access & equity, youth program development, and partnerhsips.

-Volunteers will be supported, recognized, and evaluted in their educational activities

-Extension professionals will teach volunteers to use subject matter, educational methods, and the democratic process to achieve essential elements of youth development.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Youth will be motivated by workshops, projects and other educational activities to learn/change

Volunteers will learn to provide effective and efficient guidance to youth

Changes suggested in activities related to this program will increase knowledge and experience for Florida youth involved in 4-H and other land-grant college activities.

2. Ultimate goal(s) of this Program

Life Skills developed in youth through subject matter experiences

Youth ages 5-18 will engage in one or more series of 4-H structured learning experiences as reflected on the County ES-237 Youth data report.

2. Youth who participated in a minimum six-hour 4-H in the Classroom experience will increase their skill development (e.g., confidence from public speaking) and knowledge (in specific projects such as embryology, public speaking, Ag in the Classroom) as reported by post /pre surveys or county event data.

3. Residential Camp: youth will demonstrate increased competencies in self-responsibility, social skills, respect for others and diversity, and for counselors, leadership development, as a result of their participation in the 4-H resident camping program as reported/measured by end of camp evaluation.

4. Day Camp: youth will demonstrate increased competencies in at least one of the following areas: Agricultural Literacy, Animals Sciences, Citizenship/Leadership, Communication, Environmental Sciences, Plant Science, Science and Technology, Work Force Preparation and Family Consumer Sciences as a result of participation in day camp programs.

5. Events-Activities: club members will be engaged in at least two or more 4-H youth experiences beyond their club meetings to increase their skill development in one of the following areas: service to others; confidence to speak in public; decision-making or leadership as a result of their county/district/state experiences as evidenced by county event data and post-reflective member survey.

Organizational Strategies and learning environment for youth programs

4-H clubs within a county are formed and chartered (elect officers, plan a program, include one adult volunteer, meet six hours, use democratic process, fiscal compliance)

2. 4-H community clubs meet state standards for affirmative action, marketing, and awards and recognition

3. Volunteers are trained, competent youth and adults who assist and manage 4-H programs.

4-H In the Classroom:

1. Teachers/youth in schools receive education using 4-H subject matter/curriculum

2. Teachers promote the 4-H program through providing subject matter experiences to students in classrooms.

3. Partnerships are formed between the county 4-H program and school-based organizations.

4-H Residential / Day Camping

1: youth will demonstrate increased competencies in self-esteem, peer relationships, character, citizenship, and independence.

2. youth will demonstrate increased competencies in leadership, group facilitation, teamwork, citizenship, and self-esteem as a result of the Counselor training program and their service as a resident camp counselor.

3: youth will demonstrate increased knowledge in at least one of the following project areas as a result of their participation in summer day camp program; Environmental Education, Healthy Living, Agriculture, Natural Science, Leadership, or Family Consumer Sciences.

Advisory Committees

1. Recruit, orient, and engage a diverse group of youth and adults in councils and committees that subsequently lead the 4-H county program.

2. Train council and committee members in social structure management, program operations management, and strategic planning.

Expansion and Review Committee

1. Recruit, orient, and engage a diverse group of youth and adults that subsequently reviews the current 4-H program and offers insight on how to reach underserved audiences.
2. Train Expansion and review committee members on affirmative action, parity, program recruitment, and strategic planning.

Volunteer development and systems to support youth

Volunteers positions will be identified and advertized in counties throughout Florida.

- Volunteers engaged in regular interaction with youth will understand child protection and support background screening
- Current volunteers will sustain and expand their involvement in 4-H group learning experiences.
- The number of volunteers in coordinating and managing roles will increase, particularly in county level positions
- Volunteers will actively participate in orientation and trianing provied by the University of Florida faculty
- Volunteers engaged in project study leadership will increasae in participation numbers.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	60.0	3.0	0.0	0.0
2014	60.0	3.0	0.0	0.0
2015	60.0	3.0	0.0	0.0
2016	90.0	3.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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 partnerships

- 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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention ● Demonstrations ● Other 1 (telephone calls) 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (radio)

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Change in Knowledge Life Skills Developed in Youth Through Subject Matter Experiences
2	Change in Behavior Life Skills Developed in Youth Through Subject Matter Experiences
3	Change in Condition Life Skills Developed in Youth Through Subject Matter Experiences
4	Change in Knowledge Organizational Strategies and Learning Environments for Youth Programs
5	Change in Behavior Organizational Strategies and Learning Environments for Youth Programs
6	Change in Condition Organizational Strategies and Learning Environments for Youth Programs
7	Change in Knowledge Volunteer Development and Systems to Support Youth
8	Change in Behavior Volunteer Development and Systems to Support Youth
9	Change in Condition Volunteer Development and Systems to Support Youth

Outcome # 1

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

Change in Knowledge Organizational Strategies and Learning Environments for Youth Programs

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

Change in Behavior Organizational Strategies and Learning Environments for Youth Programs

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

Change in Condition Organizational Strategies and Learning Environments for Youth Programs

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 7

1. Outcome Target

Change in Knowledge Volunteer Development and Systems to Support Youth

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 8

1. Outcome Target

Change in Behavior Volunteer Development and Systems to Support Youth

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 9

1. Outcome Target

Change in Condition Volunteer Development and Systems to Support Youth

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions. All of these can have a direct and indirect impact on youth programs.

Because of limited resources in Florida and continuing devolution youth programs can always be affected by changing public and governmental priorities. These can include appropriations. Natural and national disasters can also affect the number of volunteers available to work with youth.

Changes in state, county and federal appropriations can also affect the outcomes related to youth.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our

annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

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

2. Brief summary about Planned Program

In order to create and maintain Florida friendly landscapes Florida Extension teaches how to "grow smart" through educational programs in the areas of:

•Commercial horticulture/urban forestry services •Residential landscapes including Florida Yards and Neighborhoods (FFL/FYN)

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%	5%	0%	
102	Soil, Plant, Water, Nutrient Relationships	5%	5%	0%	
112	Watershed Protection and Management	5%	5%	0%	
133	Pollution Prevention and Mitigation	5%	5%	0%	
201	Plant Genome, Genetics, and Genetic Mechanisms	5%	5%	0%	
204	Plant Product Quality and Utility (Preharvest)	5%	5%	0%	
205	Plant Management Systems	5%	5%	0%	
206	Basic Plant Biology	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%	
216	Integrated Pest Management Systems	5%	5%	0%	
405	Drainage and Irrigation Systems and Facilities	5%	5%	0%	
602	Business Management, Finance, and Taxation	5%	5%	0%	
603	Market Economics	5%	5%	0%	
604	Marketing and Distribution Practices	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%	
802	Human Development and Family Well-Being	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The state of Florida includes 19 million residents, 58 million annual visitors, a unique ecology and climate, and a wide range of plant material grown year round. Frequently the residents, visitors and property managers have unrealistic expectations. These expectations may encourage customers to use

landscape maintenance practices that have negative impacts on Florida's environment. Many of these people are dependent on professional horticulture service providers to make decisions regarding the landscape management of their properties.

The professional horticulture services industry in Florida has a tremendous economic impact. According to the 2002 FNGA/IFAS Economic Impact Study this industry generates \$7.6 billion per year in estimated revenues. This industry also employs more than 120,000 people who make thousands of horticulture and pest management decisions daily. A large and growing portion of this work force is Hispanic.

IFAS/Extension research and science-based educational programs can provide the green industry with best management practices and skills necessary to create and manage landscapes with reduced risk to the environment.

Florida has just over 5 million acres of lawns, many of which are in close proximity to water bodies. To reduce non-point source pollution and preserve these water resources and natural areas, it is critical that lawns and landscapes are managed with an environmental emphasis. Development of Best Management Practices (BMPs) for lawns and landscapes is one way to achieve this. How fertilizer is handled, stored, and applied and how water is used in the landscape can have a large effect on reduction of non-point source pollution. These principles should be followed by commercial horticulture services as well as homeowners.

Many Florida residents - new, permanent, and temporary - share misperceptions about proper landscape care. Some Green Industry/Development professionals also have inaccurate conceptions about Florida-friendly landscaping practices. Faced with Florida's diverse and often unfamiliar conditions, well-meaning individuals often waste water, fertilizers, pesticides, and energy through inappropriate landscape designs and improper landscape practices. These existing practices can contribute to the degradation of the environment through runoff, leaching, and misuse of resources.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

•People will be motivated by workshops and other educational activities to learn/change
•Information on best practices related to healthy landscapes show that these approaches work well for these target audiences
•Changes suggested in activities related to this program will improve quality of life for participants

2. Ultimate goal(s) of this Program

Improve compliance with local, state and federal regulations
Improve procedures and techniques for managing business operations

- Use of BMPs for managing Florida landscapes
- Improve procedures and techniques for handling and using agricultural chemicals, fuels, and other product
- Improve delivery of Extension programs
- Improve competencies of Extension faculty from inservice training
- Improve agricultural and environmental knowledge/skills
- Improve volunteer development procedures and techniques

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	40.0	0.0	0.0	0.0
2014	40.0	0.0	0.0	0.0
2015	40.0	0.0	0.0	0.0
2016	83.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 (telephone calls) 	<ul style="list-style-type: none"> • Public Service Announcement • Billboards • Newsletters • TV Media Programs • Web sites other than eXtension • Other 1 (radio)

3. Description of targeted audience

Business and Industry

Florida Residents

Government and Regulatory Agencies

UFIFAS Faculty & Staff

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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)

Outcome # 1

1. Outcome Target

Change in Knowledge Commercial Horticulture/Urban Forestry Services

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in Behavior Commercial Horticulture/Urban Forestry Services

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in Condition Commercial Horticulture/Urban Forestry Services

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

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

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. These cities all have international airports. Along with this we have over 53 million tourists visiting from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

Changes in state, county and federal appropriations can also affect the outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

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

2. Brief summary about Planned Program

In the program designed to assist individuals and families to achieve economic well-being and life quality the following areas must be considered:

- Personal and family well-being
- Personal financial education
- Health, nutrition, and food safety
- Sustainable housing and home environment
- Sustainable organizations and communities

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	5%	5%	0%	
136	Conservation of Biological Diversity	5%	5%	0%	
602	Business Management, Finance, and Taxation	5%	5%	0%	
603	Market Economics	5%	5%	0%	
604	Marketing and Distribution Practices	5%	5%	0%	
608	Community Resource Planning and Development	5%	5%	0%	
701	Nutrient Composition of Food	5%	5%	0%	
703	Nutrition Education and Behavior	5%	5%	0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	5%	5%	0%	
723	Hazards to Human Health and Safety	5%	5%	0%	
724	Healthy Lifestyle	5%	5%	0%	
801	Individual and Family Resource Management	5%	5%	0%	
802	Human Development and Family Well-Being	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%	
805	Community Institutions, Health, and Social Services	5%	5%	0%	
806	Youth Development	5%	5%	0%	
901	Program and Project Design, and Statistics	5%	5%	0%	
902	Administration of Projects and Programs	5%	5%	0%	
903	Communication, Education, and Information Delivery	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Personal and Family Well-Being

Diverse family structures such as teenage parents, single parents, dual earner families, stepfamilies, grandparents raising grandchildren, aging adults and caregiving families are increasing in Florida, along with problems such as poverty, social isolation, parental substance abuse, stress, child abuse, and domestic violence. Devoting more resources to prevention education could minimize many of these challenges

Personal Financial Education

Families today bear greater personal responsibility for their own financial security. For example, changes in retirement benefits have made families responsible for funding their own retirement. Many Floridians are reliant on Social Security, designed to have been a supplemental source of retirement. While home ownership has improved, foreclosures have never been higher and Florida is having one of the greatest struggles with foreclosure in the nation. The highest national debt level in history, a staggering consumer debt load, and runaway health care costs are major problems facing all Americans. According to the Federal Reserve, household debt has hit a record high of 109 percent of household income. Personal savings is at an all time low and personal bankruptcies are up 29 percent in the past five years. In 2003, 32,170 non-business bankruptcies were filed in Florida- up 5% from 2002. In 1998, 13.6 percent of Florida's population lived in poverty. That same year 22 percent of Florida's children under 18 lived in poverty. . This problem is not likely to improve as the population of Florida continues to grow older as Florida residents are aging and Florida continues to be a retirement destination for many. It is projected that by 2025 the over 65 group will make up 26.33 percent of Florida's population. Furthermore, according to the National Fraud Center, Florida is one of the 10 states experiencing the greatest problem with fraud; many older Floridians are especially vulnerable. There is a clear need to prepare Florida's youth for fiscal responsibility given poor performance on financial literacy assessments and increasing bankruptcy rates for those under 25.

Agencies such as the Federal Reserve, US Dept of the Treasury, Florida Department of Financial Services and many statewide asset building coalitions look to ally themselves with extension to bring scholarly based programs to communities.

Health, Nutrition, and Food safety

Health- Helping Floridians Lead Healthy Sustainable Lifestyles

Twelve percent of Florida's population (7% of children) lives below the poverty level. As poverty levels rise, the nutritional and health risks to people of all ages increase. Hungry children often have learning and behavioral problems; expectant mothers with inadequate nutrition are more likely to have low birth weight babies.

Additionally, Florida adults with the lowest incomes and the least education have the highest prevalence of obesity (26.5% for those earning less than \$25,000/yr and 30.7% for those with less than a high school diploma). This disparity, along with the persistent increase in obesity rates over the last two decades, is cause for concern as obesity is linked to increased risk for a number of chronic diseases, including heart disease, hypertension, diabetes, and some cancers.

In Florida, more than 1.2 million people receive Supplemental Nutrition Assistance Program (SNAP) benefits (formerly Food Stamps); most exhaust these benefits five to ten days before the end of the month. Extension receives federal dollars from USDA to provide nutrition education to SNAP participants and eligibles in Florida to help them understand how to eat a healthy diet on a limited food budget using SNAP benefits and to choose a physically active lifestyle. Additionally, thirteen Florida counties receive funding to provide nutrition education to limited resource populations through the Expanded Food and Nutrition Education Program (EFNEP.)

Nutrition- Preventing and Managing Chronic Diseases and Conditions

Chronic diseases and conditions such as heart disease, cancer, stroke, diabetes, and obesity are leading causes of disability and death and contribute to the rising cost of health care. Risk for these conditions can be reduced through changes in lifestyle behaviors, including eating behaviors, physical

activity, and participation in health screenings.

Extension lifestyle intervention programs provide people with the knowledge, motivation, and skills they need to adopt behavior changes that promote positive nutritional status and reduced health risks, which may result in lower health care costs. In addition to in-depth programs, Extension provides research-based information designed to increase awareness about these diseases and conditions to a wider audience through written and other media. Increased awareness can motivate these individuals to participate in Extension lifestyle intervention programs.

Food Safety and Quality

Foodborne illnesses continue to be a major health concern (CDC data), especially for persons with compromised immunity such as infants, young children, older adults and persons with certain medical conditions. A majority of foodborne illnesses in the US are due to microbial causes. In Florida the majority of foodborne illnesses are attributed to commercial food service and foods prepared in private homes. Fresh produce is crucial to a healthy diet, but in the last three decades, the number of foodborne illness outbreaks associated with fresh produce has increased. Home food preservation is returning as a popular activity across Florida. Many home food processors are using practices that put them at high risk for foodborne illness and economic losses due to food spoilage. This fact is confirmed in Florida by the incidence of botulism cases in recent years due to improper canning and preservation of garlic in oil.

The food safety action team is proposing three educational programs that would make a difference to improve food safety in Florida.

1) Improving fresh produce safety/ Small farm food safety

Sustainable Housing

A home has various meanings for mankind: from a very basic meaning as a shelter that provides protection from external harms to a social and psychological meaning as a symbol of a household's social and economic status and as a place of self-expression. Most people in the United States spend more than half of their lives in housing and many households spend more than 30% of their household income for housing. Thus, a house can impact the health and financial situation as well as the social and emotional well-being of its occupants. Many households are affected by current economic conditions and Florida is listed as one of the top states with high foreclosure rates which results in declining home and neighborhood environments. Because of its demographic, geographical and current economic situation, Florida faces several different housing challenges including:

- Availability of affordable and durable housing;
- Sustainability of homeownership;
- Housing for the elderly and physically challenged;
- Maintenance of homes that are seasonally occupied;
- Environmentally-friendly building and remodeling;
- Making wise choices for equipping the interior of the home;
- Home care and maintenance;
- Maintaining neighborhood vitality and stability;

- Structurally sound housing to withstand extreme weather conditions;
- Energy efficiency; and
- Indoor environmental quality

Sustainable Organizations and Communities
Community Based Organizations (CBOs)

need a better understanding of effective organizational governance.2. Boards of Directors, councils, and officers need to know what their role is and how to carry it out.3. Organizations frequently do not know how to work effectively in a partner or collaborative relationship. This includes County Extension offices and Extension Sponsored 501c3s and other CBOs.4. Extension county faculty need core competencies to work effectively with all CBOs. These include, but are not limited to, strategic planning, governance, marketing, public relations, volunteer development and fund raising.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

For the economically disadvantage, a large majority of the elderly, and many families the quality of life in Florida needs to improve. Research has confirmed that providing education and support services to families significantly reduces many problems such as child abuse, debt, and bad eating habits. Reducing and/or improving these issues can result in better health physically and financially, a better outlook on life and more functional family units.

2. Ultimate goal(s) of this Program

Improve competencies of Extension faculty from inservice training
improved delivery of Extension programs
Improved practices to strengthen individuals, couples, and families
Improved knowledge and skills of professionals who work with individuals, couples and families
Promote self reliance and independence
Encourage community diversity and harmony
Improve and enhance responsiveness to community
Enhance community engagement and awareness of resources
improved procedures and techniques to manage debt
improved procedures and techniques to manage assets
improved procedures and techniques to reduce fraud
Develop improved family and consumer skills
Improve nutrition and other lifestyle behaviors
Improved procedures and techniques for handling and preparing food
Improved management of food resources

- Develop improved family and consumer skills
- Develop healthy lifestyle choices
- Improve procedures and techniques to improve home ownership
- Improve procedures and techniques to maintain a healthy and safe home
- Improve procedures and techniques to increase low-impact development (LID)
- Improve compliance with local, state, and federal regulations
- Improve construction and/or development/redevelopment procedures and techniques

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	40.0	3.0	0.0	0.0
2014	40.0	3.0	0.0	0.0
2015	40.0	3.0	0.0	0.0
2016	43.0	3.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Conduct workshops and meetings
- Deliver services
- Develop products, curriculum, resources
- Provide training
- Provide counseling
- Make assessments
- Work with the media
- Develop partnerships

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 (telephone calls) 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension • Other 1 (radio)

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Change in Knowledge Personal and Family Well-Being
2	Change in Behavior Personal and Family Well-Being
3	Change in Condition Personal and Family Well-Being
4	Change in Knowledge Personal Financial Education
5	Change in Behavior Personal Financial Education
6	Change in Condition Personal Financial Education
7	Change in Knowledge Health and Nutrition
8	Change in Behavior Health and Nutrition
9	Change in Condition Health, and Nutrition
10	Change in Knowledge Sustainable Housing and Home Environment
11	Change in Behavior Sustainable Housing and Home Environment
12	Change in Condition Sustainable Housing and Home Environment
13	Change in Knowledge Sustainable Organizations and Communities
14	Change in Behavior Sustainable Organizations and Communities
15	Change in Condition Sustainable Organizations and Communities

Outcome # 1

1. Outcome Target

Change in Knowledge Personal and Family Well-Being

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in Behavior Personal and Family Well-Being

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in Condition Personal and Family Well-Being

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

Change in Knowledge Personal Financial Education

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

Change in Behavior Personal Financial Education

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

Change in Condition Personal Financial Education

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 7

1. Outcome Target

Change in Knowledge Health and Nutrition

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 8

1. Outcome Target

Change in Behavior Health and Nutrition

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 9

1. Outcome Target

Change in Condition Health, and Nutrition

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 10

1. Outcome Target

Change in Knowledge Sustainable Housing and Home Environment

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 11

1. Outcome Target

Change in Behavior Sustainable Housing and Home Environment

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 12

1. Outcome Target

Change in Condition Sustainable Housing and Home Environment

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 13

1. Outcome Target

Change in Knowledge Sustainable Organizations and Communities

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 14

1. Outcome Target

Change in Behavior Sustainable Organizations and Communities

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 15

1. Outcome Target

Change in Condition Sustainable Organizations and Communities

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida is a state with constant demographic changes. The influx of immigrants, elderly, increasing birthrates and changing demographics that occur because of natural disasters such as hurricanes can change population demographics quickly.

Dwindling resources can have an effect on public priorities that directly affect dollars earmarked for individual and family educational programs.

Changes in state, county and federal appropriations can also affect the outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Maintain, Enhance and Establish Sustainable Communities

2. Brief summary about Planned Program

Healthy communities are developed by increasing knowledge and changing behaviors related to the following areas:

- Growth management and land use policy
- Citizen engagement to build active communities
- Economic development
- Leadership development
- Water and Energy resource efficiency

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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 (Situation and Scope)

1. Situation and priorities

Situation Statement

There are hundreds of municipalities in Florida, ranging from Islandia with 5 residents to the Greater Miami area with well over one million. Each Florida community has its own history and special flavor, as well as plans and hopes. The citizens of any community have the goal of working together to improve the quality of their lives and increase their opportunities.

For communities to grow, they must have the active interest and involvement of citizens in the form of a rich civic life. In this way, citizens come together to discuss and debate the needs and directions for their community. Then, once the decisions are made, citizens must come together to make and execute their plans. Another requirement for growth and opportunity is a robust economy. In Florida, a significant basis for such an economy is the natural environment, in terms of natural resources and natural beauty. Together, these account for much of Florida's overall economy in the forms of tourism, industry, recreation and agriculture. Most communities in Florida are looking to one or more of these areas as sources of economic growth.

As much as citizens and leaders might desire to have vibrant, cooperative communities, the skills needed to achieve this must be learned. Communities need guidance and expertise. They need support and

information.

Hanging over all plans and achievements, however, is the possibility of disaster. In the last ten years or so, Florida has sustained major natural disasters, including devastating hurricanes and drought. These disasters have challenged --- and in one case, leveled --- communities. A hurricane or tornado can cause irreparable damage to a community, and a severe drought can change the economic welfare of an entire region.

The past two years have made all Floridians aware of other threats to the stability of our communities. Every community must now have some response ready in case of an intentional attack. These attacks can take many forms, including bombings and the introduction of disease agents.

Central to the life of our communities are the lives of their citizens, and that means working for their safety in the everyday hazards they face in their homes and workplaces. Florida's natural environment and large agricultural sector expose Florida citizens to a wide range of personal hazards or the possibility of creating hazards for others. As concerned as we are about large-scale emergencies, Floridians are much more likely to face death or injury through equipment or situations they encounter everyday.

Whatever our communities are confronted with, Extension must be ready to play its role. Through its reputation for community involvement and quality information, Extension has special capabilities that can assist communities in valuable ways during good times and bad.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

People will be motivated by workshops and other educational activities to learn/change related to community issues.

Changes suggested in activities related to this program will improve quality of life for participants

2. Ultimate goal(s) of this Program

Improve delivery of Extension programs

Florida citizens participate more fully and effectively in the decision making that affect their communities

Improve procedures and techniques to resolve conflict

Improve competencies of Extension faculty from in-service training

Improved procedures and techniques to retain and expand businesses

Improved business environment

improved business management practices

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	5.0	2.0	0.0	0.0
2014	5.0	2.0	0.0	0.0
2015	50.0	2.0	0.0	0.0
2016	7.4	2.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 (telephone calls) 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension • Other 1 (radio)

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Change in Knowledge Growth Management and Land Use Policy
2	Change in Behavior Growth Management and Land Use Policy
3	Change in Condition Growth Management and Land Use Policy
4	Change in Knowledge Civic Engagement, Leadership, and Community Development
5	Change in Behavior Civic Engagement, Leadership, and Community Development
6	Change in Condition Civic Engagement, Leadership, and Community Development
7	Change in Knowledge Economic Development
8	Change in Behavior Economic Development
9	Change in Condition Economic Development

Outcome # 1

1. Outcome Target

Change in Knowledge Growth Management and Land Use Policy

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in Behavior Growth Management and Land Use Policy

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in Condition Growth Management and Land Use Policy

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

Change in Knowledge Civic Engagement, Leadership, and Community Development

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 5

1. Outcome Target

Change in Behavior Civic Engagement, Leadership, and Community Development

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 6

1. Outcome Target

Change in Condition Civic Engagement, Leadership, and Community Development

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 7

1. Outcome Target

Change in Knowledge Economic Development

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 8

1. Outcome Target

Change in Behavior Economic Development

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 9

1. Outcome Target

Change in Condition Economic Development

2. Outcome Type : Change in Condition Outcome Measure

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions. All of these can have serious effects on Florida communities.

Changing government regulations and population changes can impact outcomes of Extension programs. For example the increased urban building in rural counties is impacting population changes that are causing new challenges that may require different programming priorities. Communities are

also

susceptible to changes in the economy which can change and increase competing public priorities.

Changes in state, county and federal appropriations can also affect the outcomes of Extension programs in the area of healthy communities.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Families, Youth. and Communities--research

2. Brief summary about Planned Program

Diverse family structures and underserved groups, such as teenage parents, single parents, dual earner families, stepfamilies, grandparents raising grandchildren, families of military service personnel, aging adults, and caregiving families are increasing in Florida, along with problems such as poverty, social isolation, parental substance abuse and addiction, stress, child abuse, obesity, and domestic violence. Devoting more resources to prevention education could minimize many of these challenges.

Where we can likely make a difference:

Providing research in the areas of personal and family well-being not only strengthens family functioning, but it improves outcomes for Florida citizens.

Extension can provide research in the areas of personal financial management and consumer protection and the needs of youth and community. We are in a position to find scientific based answers that can be used eventually to train people working as front liners such as social workers, clergy, and others in research related to current financial information, educational programs, and interventions to address critical issues. By integrating with Extension we can increase positive financial practices of Floridians, we will help to improve financial status and create more stable communities.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%	10%	
802	Human Development and Family Well-Being	0%	0%	10%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	0%	10%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%	0%	20%	
805	Community Institutions, Health, and Social Services	0%	0%	10%	
806	Youth Development	0%	0%	40%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

A major strength of the area of families, youth and communities is the diversity of disciplines that operate in collaborative and complementary ways to address issues of importance to individuals, families, and communities. This diversity allows human development to be considered from a broad perspective, giving consideration to the key contextual setting in which people are embedded. These contextual factors include families, neighborhoods, schools, communities, and extra-community linkages. These elements form the conceptual foundation for the research that takes place in this area.

Youth Development

Some IFAS faculty focus their Hatch research on youth development issues such as crime and violence prevention in public schools. This research has led to the development of a safe school survey and school climate survey model for Florida schools, an analysis of school crime and violence data quality systems, longitudinal studies on trends of youth crime and violence, and research on youth risk prevention program effectiveness. Other youth development research has focused on investigating partnerships that adults and youth form, for the purpose of addressing the goals of a local organization, community, or government entity.

Florida youth and adults expand and learn leadership skills through partnerships that promote community volunteerism, more specifically, engagement in civic governance. The research examines the knowledge, attitudes and skills of youth and adults regarding willingness to be involved in partnerships and how they apply leadership skills in partnerships for community governance.

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension

- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Through research human development can be considered from a broad perspective, giving consideration to the complex systems in which humans are embedded. These complex systems include families, neighborhoods, schools, communities, the state, the nation and the world.

2. Ultimate goal(s) of this Program

- decrease crime and violence in youth populations
- improve quality of life
- decrease issues related to housing
- improve financial well-being
- improve community interaction and community health

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	1.0	0.0
2014	0.0	0.0	1.0	0.0
2015	0.0	0.0	1.0	0.0
2016	0.0	0.0	2.1	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct Research Experiments

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
• Demonstrations	• Web sites other than eXtension

3. Description of targeted audience

Families
Youth
Family support groups
Schools
community leaders
Businesses (public and private_

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Decrease crime and violence in youth populations

Outcome # 1

1. Outcome Target

Decrease crime and violence in youth populations

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. Florida also has other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida has three international shipping ports: Miami, Jacksonville and Tampa. These cities all have international airports. Along with this we have over 53 million tourists visiting from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant research outcomes. All of these can cause disruption in families that impact research on youth.

Changes may occur because of:
Displacement of subjects
Problem with changing populations because of economy impacts
Chaos and disorder caused by natural and national disasters
Loss of computer systems and data collections

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods
- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

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

2. Brief summary about Planned Program

Research Opportunities

In the areas of program and project support, and administration education, and communication Florida research will use the national research agenda to frame research programs so that we may access national data sets and collaborate with scientists in other disciplines in order to expand our research capacity. A new research focus will be to establish a state/national center for public issues education in agriculture and natural resources.

Core Programs of the Future

- Public policy development
- Leading and managing change
- Agricultural literacy
- Leadership in a global context
- International development through extension, communication and education

3. Program existence : New (One year or less)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

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%	60%	
902	Administration of Projects and Programs	0%	0%	10%	
903	Communication, Education, and Information Delivery	0%	0%	30%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In order to carry out strong programs and projects research is useful in the areas that focus on program and project design and evaluation. Studies also related to the efficiency and effectiveness of research, education and extension methods and proposals are important. This is a relatively new area for the Florida land-grant university to carry out projects but the information obtained is important to improving program support and communication and to improving leadership within the agricultural community as well as within the landgrant universities.

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Project and Program design is essential to successful research and Extension programming .

2. Ultimate goal(s) of this Program

- Improve project and program design
- Improve the evaluation, surveys, sampling methods and statistical analysis used in developing strong research projects and extension programs.
- Improve the efficiency and effectiveness of research, education and extension methods and proposals.
- Improve educational processes, needs and methods needed to achieve educational goals.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	0.3	0.0
2014	0.0	0.0	0.3	0.0
2015	0.0	0.0	0.3	0.0
2016	0.0	0.0	0.6	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

3. Description of targeted audience

County and state faculty
government
students

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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 Target

Improve project and program design

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 901 - Program and Project Design, and Statistics

4. Associated Institute Type(s)

- 1862 Research

Outcome # 2

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 901 - Program and Project Design, and Statistics
- 901 - Program and Project Design, and Statistics
- 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
- 902 - Administration of Projects and Programs
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery
- 903 - Communication, Education, and Information Delivery
- 903 - Communication, Education, and Information Delivery
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Research

Outcome # 3

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 901 - Program and Project Design, and Statistics
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

The continuing budget crisis is most likely to have a negative impact on reaching these outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods
- Analysis or mining of massive datasets

- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Global Food Security and Hunger--Research

2. Brief summary about Planned Program

This programs supports new science that boosts U.S. agricultural production from field to table. This research improves the global capacity to meet the growing food demand while fostering innovation in finding ways to improve food production and quality in the fight against hunger. This program also includes the study and development of science that addresses food security for vulnerable populations both in Florida and globally. Included within this program are projects related to the following topics:

Plants and their systems

Animals and their systems

Agricultural, natural resources, and biological engineering

Food and non-food products: Development, processing, quality and delivery

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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 (Situation and Scope)

1. Situation and priorities

Situations and priorities related to global food security and hunger are many and varied. As one of the major entry points for food both in and out of the United States Florida plays a unique role in reducing hunger and improving food security.

Agronomy

Research Opportunities

Agronomy will focus on food, feed, fiber and energy production with research in sustainable production systems; traditional plant breeding and molecular biology, physiology and ecology; carbon sequestration and ecosystem services; and weed ecology and management.

Core Programs of the Future

- Genetics/genomics
- Bioenergy
- Climate change/carbon sequestration
- Sustainable production systems
- Invasive plants
- International programs

Animal Sciences

Research Opportunities

Animal Sciences' focus will continue to be on the primary forage-consuming species (beef and dairy cattle and horses) and their products (meat, milk, recreation and sport). Research direction will be enhanced by our capacity to use tools of functional genomics and proteomics combined with unique models of animal performance as they relate to tropical and subtropical environments.

Core Programs of the Future

- Genomics and proteomics
- Models of animal performance particularly in tropical and subtropical environments
- Livestock systems analysis

Entomology and Nematology

Research Opportunities

Entomology and Nematology will focus on Florida's unusual susceptibility to invasions of exotic tropical and subtropical insect pests by determining the patterns and long-term ecological impacts of these invasions. A second opportunity is insect conservation and biodiversity, where we could expand into such areas as insect migratory behavior, conservation biology and habitat restoration ecology.

Core Programs of the Future

- Fundamental research capabilities in molecular studies, behavior and ecology
- Understanding pathways of entry, mechanisms of survival and dispersal by invasive insects
- Community and ecosystem-level effects of invasives
- Integration of biological control into organic and sustainable agriculture via augmentative and conservation

biological control

- Ecology of insect vectors of plant disease

Environmental Horticulture

Research Opportunities

Research opportunities for Environmental Horticulture include applications of horticultural practices to ecosystem conservation and restoration; landscape sustainability in design and installation of sustainable Florida landscapes; biotechnology and conventional breeding leading to the production of new landscape varieties; and postharvest physiology of fresh cut flowers, flowering potted plants and foliage plants.

Core Programs of the Future

- Breeding and biotechnology of improved landscape and turfgrass varieties that use fewer natural resources
- Applications of horticultural practi

2. Scope of the Program

- In-State Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Plants and Their Systems

- Improvements provided by these research projects will improve Plants and their systems
 - Improvements provided by these research projects will improve the environment
 - Information provided by these research projects will improve the economic well-being of Florida residents

Animals and Their Systems

Research will uncover critical information needed to assist the livestock industries of Florida to achieve efficient production by contributing to the solutions of livestock production problems.

Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures are followed as per IRB requirements.

Food and Non-Food Products: Development , Processing, Quality and Delivery

Improvements provided by these research projects will improve the quality of life, reduce hunger and improve food security through the improved development, processing, quality and delivery of food and non-food products.

2. Ultimate goal(s) of this Program

Plants and Their Systems

- Development and use of bioherbicides can help to diversify weed control options, supplement chemical herbicides, and provide an alternative to methyl bromide
 - Discover, develop, evaluate and disseminate knowledge and information necessary to support the agronomic-related industries of the State and nation,
 - Promote and enhance the production and utilization of agronomic commodities and the management of pest plant species for the benefit of society.
 - Developing and disseminating environmentally and economically sound technologies related to water management and plant nutrition that will increase production and utilization efficiencies

- Develop horticultural characteristics, disease and host/plant resistance through classical genetics and molecular techniques, allowing the creation of marketable products for consumers
- Research and develop crop production and physiology information and will set an example for the industry in environmentally safe practices.
- Research and solve immediate technical problems facing the fruit and vegetable industries including the development of new information, materials and techniques to increase the efficiency of production, harvest and post-harvest handling
- Develop new food plant cultivars that have improved quality characteristics.

Animals and Their Systems

Improve reproductive performance of animals

Improve nutrient utilization in animals

Improve genetics in animals

Increase knowledge in the area of animal genome

Improve animal physiological processes

Reduce environmental stress in animals

Improve animal management systems

Improve animal products (before harvest)

Increase knowledge and decrease incidence of animal diseases

Reduce instances of external parasites and pests of animals

reduce internal parasites in animals

Identify and reduce toxic chemicals, poisonous plants, naturally occurring toxins and other hazards affecting animals

Increase animal welfare/well-being and protection through improved BMPs

Agricultural, Natural Resources, and Biological Engineering

Improve design, construction and cost of facilities for animals, agricultural products, ag inputs, and equipment and other materials

Increase the efficiency and decrease labor requirements in ag and forestry production

Improve methods related to waste disposal, recycling and reuse

develop effective instrumentation and information that are important aspects of pre- and post-production agriculture.

Develop effective water management systems that include surface, subsurface drainage and all irrigation systems

Food and Non-Food Products: Development, Processing, Quality and Delivery

Develop new and improved food processing techniques

Develop new and improved food products

improve quality maintenance in storing and marketing food products

Develop new and improved non-food products and processes

Develop quality maintenance methods in storing and marketing non-food products

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	40.0	0.0
2014	0.0	0.0	40.0	0.0
2015	0.0	0.0	40.0	0.0
2016	0.0	0.0	19.7	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct research experiments

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods

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3. Description of targeted audience

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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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 Target

Increase plant Production through the development of improved plant production BMPs

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Research

Outcome # 2

1. Outcome Target

Improve Plant Protection through the development of new science and BMPs

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 212 - Pathogens and Nematodes Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Research

Outcome # 3

1. Outcome Target

Improve Animal Production through the development of BMPs

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 302 - Nutrient Utilization in Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

4. Associated Institute Type(s)

- 1862 Research

Outcome # 4

1. Outcome Target

Improve animal protection through the development of new science and BMPs

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals

4. Associated Institute Type(s)

- 1862 Research

Outcome # 5

1. Outcome Target

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. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment
- 403 - Waste Disposal, Recycling, and Reuse
- 404 - Instrumentation and Control Systems
- 405 - Drainage and Irrigation Systems and Facilities

4. Associated Institute Type(s)

- 1862 Research

Outcome # 6

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 404 - Instrumentation and Control Systems
- 501 - New and Improved Food Processing Technologies
- 502 - New and Improved Food Products

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 ()

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently lead to large-scale fires. Florida also has other weather extremes such as floods leading to large scale damage especially along coastal regions and rivers that can impact research studies.

Florida has three international shipping ports and four international airports with a new one scheduled to open in 2010. Besides imported goods over 53 million tourists visited annually from around the world. It

has been estimated that because of this international influx into the state, we are the entry point for one new invasive plant, pest or disease each week. Any of these external factors can adversely affect the 1862 research outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods
- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Climate Change

2. Brief summary about Planned Program

The Florida Extension network is well positioned to provide the information and tools Floridians need to prepare for and respond to the challenges of climate change and variability. 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.

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%	5%	0%	
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%	
121	Management of Range Resources	5%	5%	0%	
122	Management and Control of Forest and Range Fires	5%	5%	0%	
123	Management and Sustainability of Forest Resources	5%	5%	0%	
124	Urban Forestry	5%	5%	0%	
125	Agroforestry	5%	5%	0%	
131	Alternative Uses of Land	5%	5%	0%	
132	Weather and Climate	15%	15%	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%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Situation

Earth's climate changes in response to natural phenomena across a range of time-scales. Evidence now widely accepted within the global scientific community strongly suggests that climate is now also changing as a result of human activities such as emission of greenhouse gases (GHG) and changing land uses. Society will have to make decisions in the coming years about how to adapt to a changing climate. Climate variability and climate change create risks to all sectors of the economy.

The Florida Extension network is well positioned to provide the information and tools Floridians need to prepare for and respond to the challenges of climate change and variability. 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.

Priorities

1. Increasingly effective involvement of Extension faculty in the development of adaptation and mitigation strategies by local governments and clientele groups

2. Increased climate literacy of clientele on the topics of:

- Natural and anthropogenic causes of climate variability and change
- Interrelationships between climate, agriculture, natural resources and society (climate, energy, fresh water and food)

- Impacts of on-going anthropogenic

activities on the climate system

- Potential adaptation and mitigation strategies for various sectors of society

3. Florida Climate Institute grant proposals and awarded projects having integrated Research and Extension components which were developed in response to clientele sector needs surveyed by the Focus Team

4. Membership of the state-wide Climate Institute Advisory Committee provides effective interaction with potential partners

5. Local and state adaptation strategies have been developed by clientele as a result of early-adopter or demonstration projects installed or implemented with faculty facilitation and/or collaboration

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension

- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The Florida Extension network on climate change is well positioned to provide the information and tools Floridians need to prepare for and respond to the challenges of climate change and variability. It is expected that clientele with both gain knowledge and make behavioral changes necessary to reduce the human footprint that is leading to climate interruption.

2. Ultimate goal(s) of this Program

1. Help Extension faculty and clientele understand inter-relationships between climate, agriculture, natural resources and society (climate, energy, fresh water and food)
2. Introduce faculty and clientele to scenarios for sea level rise and potential implications for Florida's coastal areas and marine/ estuarine/ barrier island ecosystems
3. Introduce faculty and clientele to climate scenarios (temperature and rainfall) based on outputs of global climate models downscaled to the regional level
4. Disseminate science-based information to a diverse audience on regional climate change and associated societal response options
5. Design extension programs which teach clientele how to achieve in Florida's managed ecosystems adaptive capacity and resilience in to long-term climate change and seasonal climate variability
6. Promote and facilitate linkages between University faculty and stakeholders who need scientific information on climate risks and who would benefit from development of new technologies and decision support systems

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	4.0	1.0	0.0	0.0
2014	4.0	1.0	0.0	0.0
2015	4.0	1.0	0.0	0.0
2016	3.1	1.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations • Other 1 () 	<ul style="list-style-type: none"> • Public Service Announcement • Billboards • Newsletters • TV Media Programs • Web sites other than eXtension • Other 1 ()

3. Description of targeted 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.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Change in knowledge related to climate variability and climate change
2	Change in behavior related to climate variability and climate change
3	Change in condition related to climate variability and climate change

Outcome # 1

1. Outcome Target

Change in knowledge related to climate variability and climate change

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in behavior related to climate variability and climate change

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in condition related to climate variability and climate change

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. Florida also has five international airports and a sixth one opening in May 2010 in West Florida. Florida also has well over 53 million tourists visiting annually from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

climate Change--research

2. Brief summary about Planned Program

The University of Florida provides overall leadership of agricultural research and extension efforts in the SECC (SEClimate.org) a consortium of eight universities in Florida, Georgia, Alabama, North Carolina, and South Carolina. The overall goal of the SECC is to develop climate information and decision support systems for the Southeastern USA that will contribute to an improved quality of life, increased profitability, decreased economic risks, and more ecologically sustainable management of agricultural ecosystems, forests and other terrestrial ecosystems, and coastal ecosystems of the Southeastern USA.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

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	0%	0%	5%	
102	Soil, Plant, Water, Nutrient Relationships	0%	0%	5%	
103	Management of Saline and Sodic Soils and Salinity	0%	0%	5%	
104	Protect Soil from Harmful Effects of Natural Elements	0%	0%	5%	
111	Conservation and Efficient Use of Water	0%	0%	5%	
112	Watershed Protection and Management	0%	0%	5%	
121	Management of Range Resources	0%	0%	5%	
122	Management and Control of Forest and Range Fires	0%	0%	5%	
123	Management and Sustainability of Forest Resources	0%	0%	5%	
124	Urban Forestry	0%	0%	5%	
125	Agroforestry	0%	0%	5%	
131	Alternative Uses of Land	0%	0%	5%	
132	Weather and Climate	0%	0%	15%	
133	Pollution Prevention and Mitigation	0%	0%	5%	
134	Outdoor Recreation	0%	0%	5%	
135	Aquatic and Terrestrial Wildlife	0%	0%	5%	
136	Conservation of Biological Diversity	0%	0%	5%	
141	Air Resource Protection and Management	0%	0%	5%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

Research is conducted to develop new information to help the agricultural community reduce risks to climate variability and climate change and to take advantage of information to increase economic and environmental benefits.

Areas of work may include but are not limited to:

- Provide information for monitoring and forecasting the effects of climate on crops and pastures.
- Comparing the response on crop yields in the southeast United States with the ENSO phenomena classified

using dissimilar ENSO indices.

- Developing web-based climate risk management information
- Understanding the sequences and duration of weather events and the response of relevant technology
- Probabilities of occurrence of weather conditions critical to agricultural operations.
- Methods for incorporating climatology in the strategies, forecasts, and decision making tactics of agriculture
- Biological consequences of climatic changes
- Drivers of weather, climate, or climate change
- Mechanisms by which micrometeorology controls the reentry of pesticides, herbicides, and other agricultural chemicals into the atmosphere
- Micro- and meso-climatological conditions regulating the airborne transport of insects, bacteria, fungi, and other particulates
- Mechanisms by which micrometeorology affects gas and water exchange at the plant-atmosphere boundary layer.

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

- More effective ways of adjusting to impacts of weather and climate on agriculture and natural resources can be developed
 - There are specific modifications in the management approaches that can be more desirable to farm, forest and rangeland producers and managers.
 - Through research we can learn how potential modifications affect agriculture and natural ecology.
 - Through research we can identify information that is important for the monitoring and forecasting the effects of climate on crops, pastures, and rangelands

2. Ultimate goal(s) of this Program

- Understand climate variability to reduce the risk of droughts, wildfires, excess rainfall and freezing temperatures on agricultural and forestry systems on agricultural and forestry systems on on management of water resources
 - Develop monitoring and forecasting devices that identify changing weather.
 - Reduce damage to Florida agriculture through the development of advance forecasting and monitoring devices that predict changes in weather patterns
 - Identify crops and cultivar with improved response yields in the SE USA using ENSO indices

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	20.0	0.0
2014	0.0	0.0	20.0	0.0
2015	0.0	0.0	20.0	0.0
2016	0.0	0.0	25.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods

3. Description of targeted audience

Agricultural Producers/growers
 Florida residents/ Stakeholders

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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 Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Research

Outcome # 2

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently lead to large-scale fires. Florida also has other weather extremes such as floods leading to large scale damage especially along coastal regions and rivers that can impact research studies. Changes in climate by even a small amount to negatively impact crop production and projects in the state.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures are followed.

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data.

Core Programs of the Future

- Computationally intensive methods
- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Sustainable Energy

2. Brief summary about Planned Program

Florida has been involved in renewable energy programming for sometime under the title of sustainable energy and is only recently developing a separate focus area related to sustainable energy. At FAMU the Whole Farm Sustainable Biofuels Demonstration Project began in 2006 when the first hands-on Using Alternative Fuels Workshop was held on an organic methods farm in Sopchoppy. Small farmers and participants gain skills and knowledge to make biodiesel fuel from used/recycled vegetable oil, and to make processor. Small farmer produced biofuels to run all on-farm equipment, tractor, backhoe, and truck. Alternative energy workshops have ranged from beginners through intermediate/advanced levels.

UF has many programs in this area including a biodiesel facility in one county that interacts closely with operators for diagnosing operational problems. The Wood to Energy outreach program provides awareness and knowledge that turns wood into energy. This is a multistate program. Other programs deal with cellulosic ethanol technology and is an integrated program between research and extension. This focus team is just beginning to develop a strong central face that will lead bioenergy and sustainable energy of all kinds across the state of Florida.

3. Program existence : New (One year or less)

4. Program duration : Short-Term (One year or less)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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	10%	10%	0%	
131	Alternative Uses of Land	10%	10%	0%	
201	Plant Genome, Genetics, and Genetic Mechanisms	10%	10%	0%	
202	Plant Genetic Resources	10%	10%	0%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%	10%	0%	
204	Plant Product Quality and Utility (Preharvest)	10%	10%	0%	
205	Plant Management Systems	10%	10%	0%	
206	Basic Plant Biology	10%	10%	0%	
403	Waste Disposal, Recycling, and Reuse	10%	10%	0%	
404	Instrumentation and Control Systems	10%	10%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

As our nation looks to plants to satisfy its growing energy demands, University of Florida faculty are searching for answers to both long-term and near-term questions associated with bioenergy production and passing those options on to stakeholders. The key is to provide a scientific and practical foundation to support an economic and sustainable bioenergy future in Florida. Florida has 15 million acres of forested land, 10 million acres of farm land and 3 million acres of pasture. Landscape waste and other waste of Florida's population of 18.4 million people are significant. UF has the expertise to develop research and extension programs to demonstrate potential of energy crops, refine and develop new process technologies, conduct environmental assessments, define the economics of energy production and teach programs on energy conservation. The benefits to Florida will be economic development, environmental sustainability and energy independence.

The main focus of IFAS' bioenergy programs is on the potential production of biomass, bioconversion processes and generation and conservation of energy. The production of biomass includes species identification such as silage, sugarcane, urban tree waste, vegetable wastes, algae, and trees to name a few, low input growing systems for these potential crops, genetic evaluation of improved crops and efficient harvesting and transportation. In addition to these programs is the extraction of oil feedstocks and anaerobic digestion of waste products.

2. Scope of the Program

- In-State Extension
- Multistate Extension

- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Extension educational programs in the area of sustainable energy will increase markets. This in turn will improve the economics related to the production of biofuel feedstocks, and the dollars that improve the community and energy and environmental conservation.

2. Ultimate goal(s) of this Program

no information at this time. Team is just forming that will develop these.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	4.0	1.0	0.0	0.0
2014	4.0	1.0	0.0	0.0
2015	4.0	1.0	0.0	0.0
2016	2.3	1.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension

3. Description of targeted audience

General public
Agricultural producers/growers
Business
Community government

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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

Outcome # 1

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. Florida also has five international airports and a sixth one opening in May 2010 in West Florida. Florida also has well over 53 million tourists visiting annually from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Sustainable Energy--Research

2. Brief summary about Planned Program

projects will relate to bio-energy, use of forest products for fuel, and other ways of incorporating sustainable energy to reduce cost and improve environmental conditions.

3. Program existence : New (One year or less)

4. Program duration : Short-Term (One year or less)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%	15%	
202	Plant Genetic Resources	0%	0%	15%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	15%	
204	Plant Product Quality and Utility (Preharvest)	0%	0%	25%	
205	Plant Management Systems	0%	0%	15%	
206	Basic Plant Biology	0%	0%	15%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

As our nation looks to plants to satisfy its growing energy demands, University of Florida faculty are searching for answers to both long-term and near-term questions associated with bioenergy production and passing those options on to stakeholders. The key is to provide a scientific and practical foundation to support an economic and sustainable bioenergy future in Florida. Florida has 15 million acres of forested land, 10 million acres of farm land and 3 million acres of pasture. Landscape waste and other waste of Florida's population of 18.4 million people are significant. UF has the expertise to develop research and extension programs to demonstrate potential of energy crops, refine and develop new process technologies, conduct environmental assessments, define the economics of energy production and teach programs on energy conservation. The benefits to Florida will be economic development, environmental sustainability and energy independence.

The main focus of IFAS' bioenergy programs is on the potential production of biomass, bioconversion processes and generation and conservation of energy. The production of biomass includes species identification such as silage, sugarcane, urban tree waste, vegetable wastes, algae, and trees to name a few, low input growing systems for these potential crops, genetic evaluation of improved crops and efficient harvesting and transportation. In addition to these programs is the extraction of oil feedstocks and anaerobic digestion of waste products.

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Development of sustainable energy will increase economic gain while reducing negative effects on the natural environment.

2. Ultimate goal(s) of this Program

Develop research projects to demonstrate potential of energy crops

Refine and develop new process technologies

Conduct environmental assessments

Define the economics of energy production

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	4.0	0.0
2014	0.0	0.0	4.0	0.0
2015	0.0	0.0	4.0	0.0
2016	0.0	0.0	4.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods

3. Description of targeted audience

Residents of Florida
 Growers and producers
 Fuel producers
 Industry

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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

Outcome # 1

1. Outcome Target

Demonstrate potential of energy crops

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 202 - Plant Genetic Resources
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 206 - Basic Plant Biology

4. Associated Institute Type(s)

- 1862 Research

Outcome # 2

1. Outcome Target

Refine and develop new process technologies

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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
- 206 - Basic Plant Biology

4. Associated Institute Type(s)

- 1862 Research

Outcome # 3

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources

4. Associated Institute Type(s)

- 1862 Research

Outcome # 4

1. Outcome Target

Define the economic values of energy production

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 202 - Plant Genetic Resources

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage

especially along the coastal regions all of which could impact projects in sustainable energy research.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods
- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Childhood Obesity

2. Brief summary about Planned Program

UF and FAMU faculty will work to develop educational programs that provide essential knowledge to youth and their families that will lead improved behaviors that will reduce childhood obesity. These educational programs will provide training in nutrition education and changes in sedentary lifestyles that will decrease energy imbalance and prevent obesity.

Persons at risk for childhood obesity will do one or more of the following as needed:

- Demonstrate increased knowledge of chronic disease risk factors related to childhood obesity.
- Demonstrate increased knowledge of lifestyle practices that can reduce health risks.
- Indicate intent to improve one or more lifestyle practices.
- Improve one or more lifestyle practices.
- Improve one or more modifiable health risk factors (e.g., high blood pressure).

3. Program existence : Intermediate (One to five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

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%	
723	Hazards to Human Health and Safety	10%	10%	0%	
724	Healthy Lifestyle	10%	10%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Childhood Obesity

Over the last 30 years the prevalence of obesity in children has increased significantly. Data from NHANES 1967-1980 state that only 5%, 6.5%, and 5% of children aged two to five, six to 11, and 12 to 19, respectively, were obese. Fast forward to NHANES 2003-2004 and the numbers have increased to 13.9%, 18.8% and 17.4% in these same age groups. Diseases associated with obesity once thought to only affect adults such as type 2 diabetes and heart disease are now affecting children in elementary and middle schools. In addition, trends in body weight of young adults show that the years from ages 18-30 are marked by weight increases and increased prevalence of overweight. Obese children and adolescents are more likely to become obese young adults. These data show that the long-term consequences of childhood and adolescent obesity may ultimately be the health consequences of adult obesity.

Energy imbalance leads to weight gain and obesity, which is associated with different diseases. Changes in behavior and environment have made it easy for people to consume excess calories and remain sedentary. Nutrition education teaches these populations essential information that can lead to a decrease in this energy imbalance and prevent obesity. Programs that educate children, adolescents, and young adults to make better dietary choices and increase physical activity are needed to help reverse the trends that are putting our youth at risk.

Priorities include:

- Improve parenting strategies that will allow parents and children to overcome barriers to eating healthy and being physically active
- Improve family communication to encourage family members to work together to plan healthier food choices, family mealtimes, and physical activity.
- Increase parent and child knowledge of the best food choices to meet nutritional needs within caloric requirements
- Increase education for parents and children on decreasing screen time and the impact it has on nutrition, physical activity, and body image
- Increase knowledge of childcare providers on nutrition and how to incorporate nutrition education into their curricula
- Increase education of policy makers on the long-term financial implications of obesity
- Increase utilization of government nutrition programs such as WIC, SNAP, and the School

Breakfast and Lunch Programs in at-risk communities

- Decrease restrictions on federal funding in order to develop innovative approaches to meet the needs of the community
- Improve the BUILT environment to increase the opportunity for children to be active daily in a safe environment
- Improve the nutritional quality of the School Breakfast and Lunch Programs and decrease the number of competing foods available on school campuses
- Change PE requirements to increase physical activity across all ages and improve the quality of activity during classes
- Increase access/availability of nutrition information and healthy recipes for fruits and vegetables at grocery stores and farmers markets
- Increase availability of nutritious, affordable food items in low-income communities

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Educational programs that educate children, adolescents, young adults and their parents to make better dietary choices and increase physical activity will reverse the trends now leading to childhood obesity.

2. Ultimate goal(s) of this Program

- Demonstrate increased knowledge of lifestyle practices that can reduce childhood obesity
- Demonstrated intent to improve lifestyle practices that can reduce childhood obesity
- Improve one or more lifestyle practices that reduce childhood obesity
- Show a reduction in weight leading to a decrease in health risk factors related to childhood obesity

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	25.0	2.0	0.0	0.0
2014	25.0	2.0	0.0	0.0
2015	25.0	2.0	0.0	0.0
2016	14.2	2.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Workshop ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (radio)

3. Description of targeted 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.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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

Outcome # 1

1. Outcome Target

Changes in knowledge that will reduce childhood obesity

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Changes in behavior related to nutrition that will reduce childhood obesity

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Changes in physical activity that will lead to reduced childhood obesity

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 4

1. Outcome Target

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

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. Florida also has five international airports and a sixth one opening in May 2010 in West Florida. Florida also has well over 53 million tourists visiting annually from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Any of this could be an external factor affecting land-grant outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Childhood Obesity--Research

2. Brief summary about Planned Program

UF faculty will work to provide essential knowledge that will lead improved behaviors which may reduce childhood obesity. These research projects in nutrition and changes in sedentary lifestyles may provide insights into decreasing energy imbalance and preventing childhood obesity.

3. Program existence : New (One year or less)

4. Program duration : Short-Term (One year or less)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

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%	
703	Nutrition Education and Behavior	0%	0%	25%	
704	Nutrition and Hunger in the Population	0%	0%	5%	
723	Hazards to Human Health and Safety	0%	0%	5%	
724	Healthy Lifestyle	0%	0%	10%	
802	Human Development and Family Well-Being	0%	0%	5%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Poverty rates in Florida continue to raise, with children, single minority women with families (racial and ethnic minorities), and older adults accounting for a substantial proportion of the population. U.S. Census estimates from 2008, indicate that 12.6% of individuals in the state, with 17.6% as children and 10% as adults over 65 years old. Family poverty estimates comprise over 9% of the state's population,

with 34% of families headed by single females with no husband present. Florida's most vulnerable population faces increased risk of low food security and obesity, which is the precursor for many chronic diseases such as heart disease, hypertension, diabetes and some cancers. The vulnerability of this population is further confirmed by Gleason, Rangarajan, & Olson (2000), suggesting that many low-income adults lack the knowledge and skills to maintain food security and a healthy diet.

The USDA study on food security conducted in 2008, suggests that the lowest levels of food security exist within households that fall below federal poverty guidelines for a family of four, typically headed by single women of African-American or Hispanic racial or ethnic backgrounds. The study also reported an overall increase in low and very low food security in Florida during 2004-2008, with 12.2% of Florida households reporting low food security in 2006-2008, reflecting an increase from 8.9% reported in 2004-2006. Florida's low food security rate mirrored that of the national rate while the low and very low food security rate slightly exceeded the national rate of 4.6%. More recently research in the area of childhood obesity has focused on nutrition in food and changes in behavior that can lead to reduced body mass.

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Finding foods that are tasty and nutritional can reduce the body mass in youth and adolescents. This can improve health and reduce the number of illnesses that are food related. Finding strategies that will help youth improve eating and exercise that would lead to reduced weight and other issues related to childhood obesity.

2. Ultimate goal(s) of this Program

- Increase knowledge of chronic disease risk factors related to childhood obesity.
- increased knowledge of lifestyle practices that can reduce health risks.
- identify strategies that improve one or more lifestyle practices that reduce weight gain in children.
- identify life style practices that would be most likely to reduce childhood obesity
- identify one or more methods of reducing modifiable health risk factors (e.g., high blood pressure) in youth

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	1.0	0.0
2014	0.0	0.0	1.0	0.0
2015	0.0	0.0	1.0	0.0
2016	0.0	0.0	2.4	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

3. Description of targeted audience

Florida residents
parents and children

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Identified ways to increase acceptance of sustainable change in eating and exercise

Outcome # 1

1. Outcome Target

Identified ways to increase acceptance of sustainable change in eating and exercise

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Besides the external factors related to climate and finance there is the issue of obtaining permission to work with youth as needed for these research projects. Identifying youth with obesity issues has negative connotations for children that must be carefully monitored and in many cases protective parents resistant to change themselves may increase the factors making these studies difficult to obtain necessary participants (both adults and children).

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods

- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling

V(A). Planned Program (Summary)

Program # 16

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

Food safety and security are critical components of a sustainable industry. According to the Centers for Disease Control and Prevention (CDC), there are over 250 known different food borne diseases. These diseases are caused by viruses, chemicals, toxins, and fungi, as well as bacteria which are the major source of illness. In the United States, where the food supply is one of the safest in the world, it is estimated that there are 76 million incidences of food borne illness and approximately 5,000 deaths yearly.

These issues surrounding safety and security span the entire food sector, ranging from consumers to the food service and processing industries. Increasingly, food safety and security are a focus of government, industry, media and consumer awareness. The need for accurate, easy to understand, accessible information is paramount to the success of the entire industry and the health and welfare of the entire population.

3. Program existence : New (One year or less)

4. Program duration : Short-Term (One year or less)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	5%	5%	0%	
212	Pathogens and Nematodes Affecting Plants	5%	5%	0%	
213	Weeds Affecting Plants	5%	5%	0%	
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%	5%	0%	
215	Biological Control of Pests Affecting Plants	5%	5%	0%	
216	Integrated Pest Management Systems	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%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	5%	5%	0%	
315	Animal Welfare/Well-Being and Protection	5%	5%	0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	15%	15%	0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	20%	20%	0%	
721	Insects and Other Pests Affecting Humans	5%	5%	0%	
722	Zoonotic Diseases and Parasites Affecting Humans	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

Foodborne illnesses continue to be a major health concern (CDC data), especially for persons with compromised immunity such as infants, young children, older adults and persons with certain medical conditions. A majority of foodborne illnesses in the US are due to microbial causes. In Florida the majority of foodborne illnesses are attributed to commercial food service and foods prepared in private homes. Fresh produce is crucial to a healthy diet, but in the last three decades, the number of foodborne illness outbreaks associated with fresh produce has increased. Home food preservation is returning as a popular activity across Florida. Many home food processors are using practices that put them at high risk for foodborne illness and economic losses due to food spoilage. This fact is confirmed in Florida by the incidence of botulism cases in recent years due to improper canning and preservation of garlic in oil.

The food safety action team is proposing three educational programs that would make a difference to improve food safety in Florida.

- 1) Improving fresh produce safety/ Small farm food safety
- 2) Revitalizing home food preservation

Potential partners: Produce venders; canning centers; regulators

- 3) Continuing food safety education of food handlers

Potential partners: Regulators; produce associations; consumer organizations; farmers market alliance; UF\Emerging Pathogens Institute

2. Scope of the Program

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Improved awareness and changes in behavior can improve food safety.

2. Ultimate goal(s) of this Program

Objective 1: Improving fresh produce safety/ Small farm food safety

- 1) Small farm operators will understand how to reduce food safety risks in their operations
- 2) Workers/ produce handlers will gain knowledge on produce safety
- 3) Consumers will gain knowledge about safe produce handling methods

Objective 2: Revitalizing home food preservation

- 1) FCS county faculty will increase their competency in the basics of food preservation
- 2) Young adults (4-Hers) will increase knowledge of safe home food preservation methods.

3) Consumers will increase skills in research-based approaches to home food preservation

Objective 3: Continuing food safety education for food handlers

- 1) Commercial food managers/operators will obtain certification in ServSafe®
- 2) Food service workers/ handlers will increase their food safety competency
- 3) Consumers and volunteers will increase their food safety knowledge
- 4) County faculty will increase competency in issues related to assisting persons wanting to start foods-related businesses

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	25.0	3.0	0.0	0.0
2014	25.0	3.0	0.0	0.0
2015	25.0	3.0	0.0	0.0
2016	16.5	3.0	0.0	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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 Address.
- 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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • One-on-One Intervention • Demonstrations 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

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

Outcome # 1

1. Outcome Target

Change in knowledge related to processing, distribution, safety and security of food systems

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 2

1. Outcome Target

Change in behavior related to processing, distribution, safety and security of food systems

2. Outcome Type : Change in Action Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

Outcome # 3

1. Outcome Target

Change in condition related to processing, distribution, safety and security of food systems

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 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

4. Associated Institute Type(s)

- 1862 Extension
- 1890 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently led to large-scale fires. We also have other weather extremes such as floods leading to large scale damage especially along the coastal regions.

Florida also has three international shipping ports: Miami, Jacksonville and Tampa. Florida also has five international airports and a sixth one opening in May 2010 in West Florida. Florida also has well over 53 million tourists visiting annually from around the world. It has been estimated that this international influx into Florida has made us the entry point of one new invasive pest, plant or disease each week. Many of these diseases and pest may impact food safety.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Florida land-grant college (both UF and FAMU) understands the value of evaluation in our annual program plan. Methods of evaluation are included as part of the annual faculty activity plan of work and report of accomplishment process (Workload). This information is collected as part of the logic model used in our Florida system and will be available for the NIFA reports of accomplishment on a yearly basis.

V(A). Planned Program (Summary)

Program # 17

1. Name of the Planned Program

Food Safety--Research

2. Brief summary about Planned Program

Work in this area includes understanding and improving food safety and security. Work in this area will reduce hazards to human health and safety and improve food security.

3. Program existence : New (One year or less)

4. Program duration : Short-Term (One year or less)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	0%	0%	5%	
212	Pathogens and Nematodes Affecting Plants	0%	0%	5%	
213	Weeds Affecting Plants	0%	0%	5%	
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	0%	0%	5%	
215	Biological Control of Pests Affecting Plants	0%	0%	5%	
216	Integrated Pest Management Systems	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%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%	0%	5%	
315	Animal Welfare/Well-Being and Protection	0%	0%	5%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	0%	0%	15%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%	0%	15%	
721	Insects and Other Pests Affecting Humans	0%	0%	5%	
723	Hazards to Human Health and Safety	0%	0%	10%	
	Total	0%	0%	100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

Foodborne illnesses continue to be a major health concern (CDC data), especially for persons with compromised immunity such as infants, young children, older adults and persons with certain medical conditions. A majority of foodborne illnesses in the US are due to microbial causes. In Florida the majority of foodborne illnesses are attributed to commercial food service and foods prepared in private homes. Fresh produce is crucial to a healthy diet, but in the last three decades, the number of foodborne illness outbreaks associated with fresh produce has increased. Home food preservation is returning as a popular activity across Florida. Many home food processors are using practices that put them at high risk for foodborne illness and economic losses due to food spoilage. This fact is confirmed in Florida by the incidence of botulism cases in recent years due to improper canning and preservation.

Projects may be carried out in many areas related to food safety including the following:

- 1) Improving fresh produce safety/ Small farm food safety
 - 2) Identifying BMPs for home food preservation
 - 3) Identifying BMPs for food safety related to food handlers

2. Scope of the Program

- In-State Research
- Multistate Research
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Finding new and better practices related to food safety would reduce the number of cases of foodborne illnesses in Florida.

2. Ultimate goal(s) of this Program

- 1) Improving fresh produce safety/ Small farm food safety
 - 2) Identifying BMPs for home food preservation
 - 3) Identifying BMPs for food safety related to food handlers

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	0.0	1.0	0.0
2014	0.0	0.0	1.0	0.0
2015	0.0	0.0	1.0	0.0
2016	0.0	0.0	39.1	0.0
2017	0.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	Indirect Methods

3. Description of targeted audience

Residents of Florida
 Those in restaurant related careers
 growers and producers
 home canners

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Identify BMPS that would decrease foodborne illness

Outcome # 1

1. Outcome Target

Identify BMPS that would decrease foodborne illness

2. Outcome Type : Change in Knowledge Outcome Measure

3. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety

4. Associated Institute Type(s)

- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

Florida is a state located in the tropics. Natural disasters such as tropical storms and hurricanes are common annual occurrences in this state. Severe weather conditions such as droughts frequently lead to large-scale fires. Florida also has other weather extremes such as floods leading to large scale damage especially along coastal regions and rivers that can impact research studies.

Florida has three international shipping ports and four international airports with a new one scheduled to open in 2010. Besides imported goods over 53 million tourists visited annually from around the world. It has been estimated that because of this international influx into the state, we are the entry point for one new invasive plant, pest or disease each week. Any of these external factors can adversely affect the 1862 research outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Research Opportunities

The major trends in statistics are in Bayesian statistical methods, methods for large datasets and computationally intensive analyses, spatial-temporal modeling, statistical genetics and modeling of non-standard data. Florida IFAS/research understands the importance of evaluating projects to provide scientifically accurate information and recommendations. Accepted research guidelines and procedures may include the following among others:

- Computationally intensive methods
- Analysis or mining of massive datasets
- Statistical genetics
- Spatial-temporal modeling
- Multivariate analysis
- Bioinformatics
- Generalized linear mixed models
- Bayesian statistics
- Semi-parametric methods
- Model diagnostics
- Stochastic processes and models
- Nonlinear modeling