# 2014 University of Florida Research and Extension and Florida A&M University Extension Combined Plan of Work

**Status: Accepted**

**Date Accepted: 05/30/2013**

## I. Plan Overview

### 1. Brief Summary about Plan Of Work

**SUMMARY OF 2014-2018 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 2018. However, it should be noted that the Florida Cooperative Extension service (FAMU/CAFS and UF/IFAS) and the UF 1862 research have been undergoing a long-range planning process (2011-2012) which will still be undergoing changes into early 2013.

Through its long range planning process, the Florida land-grant universities identified 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 many focus teams with varying interests. Representatives of many underrepresented and under-served target audiences were 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/CAFS and UF/IFAS used this process consistently to identify the most critical needs. The process used by Extension can be found at http://pdec.ifas.ufl.edu/lrp/along with the final Florida Extension Roadmap Florida will follow from 2013 to 2023. The Research Roadmap is located at http://researchtools.ifas.ufl.edu/research-roadmap/.

These primary needs through 2023 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

**1862/1890 Cooperative Extension**

**Extension: Florida Extension Roadmap 2013-2023**

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 has reached out to the community/individual level. The valued perspectives that result when stakeholders, county extension advisory committees, traditional and potential audiences and Extension faculty come together 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 is 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 high-priority initiative areas in which to focus:

1. Increasing the sustainability, profitability, and competitiveness of agricultural and horticultural enterprises
2. Enhancing and protecting water quality, quantity, and supply
3. Enhancing and conserving Florida's natural resources and environmental quality
4. Producing and conserving traditional and alternative forms of energy
5. Empowering individuals and families to build healthy lives and achieve social and economic success
6. Strengthening urban and rural community resources and economic development
7. Preparing youth to be responsible citizens and productive members of the workforce.

**NIFA Initiatives**

Along with these initiatives above specific to Florida, UF/IFAS and FAMU/CAFS are committed to the following national NIFA initiatives:

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

**1862/1890 Cooperative Extension**

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**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/CAFS 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 IFAS/CAFS have individually on Florida and its citizens.

The Cooperative Extension Program is the outreach arm of the College of Agriculture and Food Sciences (CAFS) atFlorida A&M University (FAMU). The FAMU Cooperative Extension Program provides research-based educational information and direct technical assistance to improve the quality of life for limited resource citizens. As a result, 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/CAFS Cooperative Extension Program. In 2010, The FAMU Cooperative Extension Program developed strategic goals in order to improve the quality of life for Florida's underserved and limited resource citizens.

- Create innovative research-based program technologies which enhance the profitability and sustainability of small farms and urban and rural communities
- Promote the socio-economic well-being of limited resource individuals and families
- Develop specialized educational and enrich programs designed to attract and retain youth involvement in agriculture and related sciences.

As a unit of the Florida Cooperative Extension Service, the program is also responsible for coordinating educational programming and outreach activities of mutual benefit with the University of Florida/Institute of Food and Agriculture Sciences (IFAS).

Florida citizens in the following counties are served by extension faculty and staff in the FAMU Cooperative Extension Program: Gadsden, Gulf, Franklin, Hamilton, Jackson, Jefferson, Leon, Madison, Suwannee, Wakulla, Hillsborough and Escambia.

In these counties, FAMU/CAFS is particularly interested in issues related to the following Cooperative Extension programs which they reach through the statewide, regional and county initiatives:

- Agriculture and Natural Resources, including:
  - Farm to School

- Animal Health & Small Ruminants
- New & Beginning Farmers
- Agribusiness Management and Alternative Market Development
- Small-Scale Crop and Livestock Enterprises
- Community and Urban Agriculture
- Food Safety
- Integrated Pest Management
- Sustainable Agricultural Systems

- Community Resource Development
- Family and Consumer Science, including
  - Expanded Food and Nutrition Education Program
  - Family Resource Management
- 4-H and Youth Development

More information can be found on the FAMU programs at the following URL: http://www.famu.edu/cesta/main/index.cfm/cooperative-extension-program/about-the-cooperative-extension-program/

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

| Year | Extension | | Research | |
|---|---|---|---|---|
| | 1862 | 1890 | 1862 | 1890 |
| 2014 | 418.0 | 20.0 | 111.0 | 0.0 |
| 2015 | 418.0 | 20.0 | 111.0 | 0.0 |
| 2016 | 418.0 | 20.0 | 111.0 | 0.0 |
| 2017 | 418.0 | 20.0 | 111.0 | 0.0 |
| 2018 | 418.0 | 20.0 | 111.0 | 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

**Extension and Research Merit and Peer Review Process**

**EXTENSION 1862/1890 MERIT REVIEW PROCESS**

**Intention**: This document sets out performance standards and operational guidelines for the Florida Land Grant Universities (UF and FAMU Extension). The intention of the document is to facilitate both Universities and all integrated, multi-institutional, and multi-state activities in complying with the provisions of the federal Agricultural Research, Extension, and Education

Reform Act of 1998. Adoption of these standards and guidelines will be primarily accomplished by adoption-by-reference in the Florida Plan of Work.

**Definitions**: Merit review process of an Extension focus team area is defined as the evaluation of the quality and relevance to program goals and the focus team's level of success in meeting the intended objectives and the anticipated outcomes. Merit Reviewers will also be qualified by their status in the same discipline, or closely related field to judge the worthiness of the program.

The topics covered by this document pertain to extension programs (state iniatives and priority workgroups) that are to be sanctioned and funded as part of the federal-state partnership. These standards and guidelines do not apply to proposed extension programs that are subject to peer review by competitive grant agencies, or peer review of extension publications. Thus, all extension programs sponsored by Florida Land Grant Colleges will have been formally merit reviewed, before the expenditure of any federal funds.

**Process**: The designated review coordinator will call for a merit review of the proposed Extension priority workgroup within each of seven iniatives. A minimum of three peer scientists will be selected to read and provide written comments to the appropriate administrator on the proposed program. Members of an appropriate iniative/priority group team will read and provide written comments to the appropriate administrator on proposed programs (priority areas) on an annual basis.

**Terms of Reference**: The reviewers will focus their attention on questions of the quality of the proposed science, technical feasibility of the 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.

**Responsibility**: All Merit Review activities for proposed Extension programs will be the responsibility of the Dean of Extension or his/her designee .

**Appointment of Reviewers**: Merit reviewers may be selected from the same campus or from another institution or organization at the discretion of the Extension dean(s), or by his/her delegated authority. 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.

**Documentation**: Reviewers will be asked to present their findings in either paper or electronic format, and records of the 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. Document storage of all materials related to the Peer and Merit Review will be paper and/or electronic and will be stored in the PDEC office or a designated online site.

**Extension programs not covered**: Programs funded by competitively awarded grants, federal contract research projects, and federal cooperative agreements are not subject to these provisions, as they would be peered reviewed under other authorities.

. Adjustments to this merit review process will be made as needed.

**Florida 1862 Research Peer 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. If significant changes are made to the structure of the state-level program during the off year, the designated administrative advisor (generally a department chair) may call for a peer review of the project. 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.

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, 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.

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. Results of peer reviews will be stored within each individual department either in paper form or electronically.

Adjustments to peer reviews may be made by the Dean of Research as required.

## 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 2011-12 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 grassroots listening sessions which occurred in 2012. Through this process Florida is aware of whether these issues are county specific or state-wide. Extension priority work teams in each state-wide iniative area are provided with all of this information before they begin to design state-wide programs around the issues. 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&mdashits important features, changes impacting it and what the community values&mdashwill 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 final stages of a long Range Planning Process and restructuring. Iver tge oast 15 months 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 intamely involved both in the strategic planning process and as participants. These needs are filtered through Extension Focus teams. For the past 10 years each focus area team has been 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. The goal and focus teams are being updated and in the future will be refereed to priority initiatives and priority workgroups. These changes are based on 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

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

**Program # 1**

**1. Name of the Planned Program**

Empowering individuals and families to build healthy lives and achieve social and economic success

**2. Brief summary about Planned Program**

**Brief Summary**

Challenges facing Florida's residents whether young middle aged or elders are formidable. Many issues relate to food safety and nutrition, housing, family financial management, aging and human development and family relationships.

Programming that addresses nutrition is needed for a variety of reasons in Florida. Almost 14% of the population lives below the poverty level and as poverty levels rise, the nutritional and health risks to people of all ages increase. Hungry children often have learning and behavioral problems and expectant mothers with inadequate nutrition are more likely to have low birth weight babies. Furthermore, Florida adults with the lowest incomes and the least education have the highest prevalence of obesity. 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.

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 numbers of foodborne illness outbreaks associated with fresh produce has increased. Because of the recent economic downturn, and because of the recent approval of the Florida Cottage Food Rules, home food preservation is returning as a popular activity across Florida. It is possible for Floridians to sell certain homemade products under the Florida Cottage Food Rules at farmer markets. Many home food processors are using practices that put them at high risk for foodborne illness and economic losses due to food spoilage. Priorities will be given to three primary target audiences who will make a difference to improve food safety behavior and outcomes in Florida.

The Florida Cooperative Extension Service desires to increase the involvement of Florida residents toward improving the overall performance of their family living situation within the home and community. Both UF and FAMU are well suited to impact this situation because it combines the depth and breadth to conduct research with the reach to provide the most current evidence-based information to Florida citizens. Our PWG comprises individuals who each have a unique strength and approach toward positively impacting this situation.

Also closely related is the need to help Floridian's improve their ability to manage money. Four years after the recession hit, Floridian households are still struggling to get themselves back on stable financial footing. Despite observing a slow improvement in some of the areas of financial management, Floridians have several financial challenges to yet overcome. The main economic indicators relevant to the context of the state of Florida are bankruptcy, poverty, foreclosure and credit card and student loan debt level; thus, these areas are explored further.

In order to support Florida's families, efforts must be made to prevent and buffer the effects of contemporary stressors. Not only can this lead to improved societal and workforce functioning, it can also lead to cost-savings to the state. Florida's families are experiencing unprecedented levels of stress. Difficult economic times have led to substantial job loss and financial strain for families; approximately

21% of children in Florida are living in poverty, but a significantly higher percentage (42%) of children live in low-income households. This has been compounded by the increasing percent of Florida's children being raised in single parent families (38%), which leads to fewer financial and emotional resources available for children, and possible increases in emotional strain to both parents and children. Increases in natural (e.g., hurricanes) and manmade (e.g., the Deepwater Horizon oil spill) disasters have led to further economic strain and trauma for Florida's families.

The 2010 Florida Department of Elder Affairs' Assessment of the Needs of Older Floridians, has identified a series of issues plaguing the elderly including inadequate nutrition (26%) and financial constraints that limited their ability to fill prescriptions (10%) and get dental (30%), eye (24%), or mental health (11%) care. Twenty-one percent surveyed reported problems with their home, including upkeep and minor or major repairs, and difficulty paying rent or the mortgage. Over half of older Floridians reported they needed assistance with daily activities such as housekeeping and shopping, while 17% needed help with personal care such as bathing and dressing. Usually, older adults are cared for by a family member, often someone who also is elderly. Older adults are increasingly serving as caregivers for their grandchildren; among those who are caring for grandchildren, 36% are over the age of 60 and 18% live in poverty. Additionally, the older adult population is becoming more racially and ethnically diverse. Since ethnic minorities are at high risk for the major chronic diseases, this demographic change will increase the burden of chronic diseases and conditions in the elder population. Where older adults live can affect their physical and mental health. Home design and neighborhood and community design can positively or negatively affect our aging population. A number of studies have shown that more open space, walkable neighborhoods, healing and community gardens, and opportunities to enjoy the outdoors lead to better mental and physical health in senior citizens.

**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

**Situations and Priorities**

A recent grassroots series of listening sessions identified five major proiorties impacting individuals and families in Florida. These priority areas include:

- Food safety and nutrition
- Housing
- Family financial management
- Aging
- Human development and family relationships

Improvements in these areas can lead to a healthier Florida population. It can also mean a better quality of life for each Floridian while reducing the negative impact on the Florida economy.

**Food Safety and Nutrition**

Over the past 30 years, the prevalence of obesity in children and adolescents has tripled. Currently, 17% of children 2 to 19 years are classified as obese. In addition, 23% of children in Florida live in poverty, with over 1.5 million eligible to receive free or reduced lunch. For many children, the National School Lunch and Breakfast Programs provide most of their food during the week. Offering healthy, local food can ensure that children are eating the nutrient-rich foods they need while simultaneously supporting Florida's agricultural economy. Recently, the Florida Department of Agriculture and Consumer Services (FDACS) has partnered with UF/IFAS to establish a Florida Farm to School Program. The goal of this program is "to engage farmers, state and federal agencies, land grant institutions, school food authorities, and families through facilitated discussion, training, and technical support in the development of a successful FDACS Florida Farm to School Program that improves the health and welfare of children and contributes positively to Florida's agricultural economy." With Extension's relationship with many school districts, Extension is perfect to partner with FDACS to roll out its Farm to School Program.

Programming that addresses nutrition is needed for a variety of reasons in Florida. Almost 14% of the population lives below the poverty level and as poverty levels rise, the nutritional and health risks to people of all ages increase. Hungry children often have learning and behavioral problems and expectant mothers with inadequate nutrition are more likely to have low birth weight babies. Furthermore, Florida adults with the lowest incomes and the least education have the highest prevalence of obesity. 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, participation in the Supplemental Nutrition Assistance Program (SNAP) has increased by 111% since 2007 for a total of 2,603,185 monthly recipients as of December 2010. Most of these recipients 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 (SNAP-Ed Program) 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, twelve Florida counties receive funding to provide nutrition education to limited resource families through the Expanded Food and Nutrition Education Program (EFNEP). All educational materials are based on the Dietary Guidelines for Americans, 2010, and USDA's food guidance system - MyPlate.

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 healthful 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 reduce health risks, which may result in lower health care costs. In addition to intensive programs, Extension offers research-based information designed to increase awareness about these diseases and conditions to a broad audience through written materials and other media. Increased awareness can motivate these individuals to participate in Extension lifestyle intervention programs.

Although the Dietary Guidelines for Americans 2010 includes food safety recommendations when preparing and eating foods to reduce the risk, 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 numbers of foodborne illness outbreaks associated with fresh produce has increased. Because of the recent economic downturn, and because of the recent approval of the Florida Cottage Food Rules, home food preservation is returning as a popular activity across Florida. It is possible for Floridians to sell certain homemade products under the Florida Cottage Food Rules at farmer markets. Many home food processors are using practices that put them at high risk for foodborne illness and economic losses due to food spoilage. Priorities will be given to three primary target audiences who will make a difference to improve food safety behavior and outcomes in Florida.

The goal of programming in the Food Safety and Nutrition Priority Work Group is to provide consumers in Florida with the knowledge, skills, and self-efficacy necessary to make better nutrition and physical activity choices, as well as helping them reduce the risk of foodborne illness. Working towards this goal through Extension is ideal as the strong presence of Extension in every county allows for the nutrition and physical activity needs of many Floridians across the state to be addressed with the help of faculty with expertise in these areas. Extension faculty have the experience to forge relationships necessary to comprehensively assess the types of programs needed by each county. The relationship county faculty have with state faculty allows for the exchange of current research-based programs and cutting-edge information that can be shared with Florida consumers. Potential partners include local, state, and federal agencies; non-profit agencies; schools and universities; businesses; faith-based organizations; state and local health departments; hospitals; other community agencies and organizations; University of Florida researchers; Master Nutrition Education Volunteers; and health professionals.

**Housing**

Cantrell (2012) and Cantrell & Stafford (2012) compared US and Florida residents on 162 items related to improving the overall performance of their family living situation within the home and community (performance in this sense refers to how effective a household is in accomplishing its objectives, however those may be defined). Interestingly, findings from these studies showed these two populations to be highly correlated on most of the items measured, suggesting that Florida homeowners have many similar desires and needs to those of the US population when it comes to their home and community living situation. Typical considerations for increasing the physical (i.e., mechanical) performance of a home involve construction products and practices that address such items as air sealing and insulation, moisture control, HVAC[1], exhaust fans, and appliances (Porter et al, 2011; U.S. Department of Energy, 2011). However, there are many considerations for increasing the physical performance of the home that are "less" mechanical in nature, and these types of considerations, which can account for as much as half the increase in the total overall home living situation, are the types of considerations that Cantrell's studies investigated. These considerations were motivated by the realization that although homes can benefit from costly mechanical upgrades, Wilhelmson (2008) found that families' single largest investment was not being adequately protected because families generally lacked attention and dedication to a routine level of home maintenance and streamlined operations. M

**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

Through behavioral changes brought about by research-based educational programs in areas related to individual and family lifestyle changes there will be an improved quality of life, a healthier and more economically improved population.

This change in the population will reduce the amount of state funds used to improve health and increase the tax base allowing for more money to be spent to improve the qualtiy of life of Florida residents as well as their environment.

### 2. Ultimate goal(s) of this Program

**Food Safety and Nutrition**

• Participants will increase their food, nutrition, physical activity, food handling, and resource management knowledge.
• Participants will report intent to change behaviors related to nutrition, physical activity, food handling, and resource management.
• Participants will improve behaviors related to their nutrition, physical activity, food handling, and resource management.
• Participants will reduce incidence of food insecurity.
• Persons at risk for chronic disease will do one or more of the following as needed: - Demonstrate increased knowledge of chronic disease risk factors. - 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).
• Persons with type 2 diabetes (50 or younger) will do one or more of the following: - Demonstrate increased knowledge of ADA Standards of Medical Care in Diabetes. - Set goals for improving lifestyle practices. - Practice self-monitoring of blood glucose more regularly. - Plan meals using an accepted food system more often. - Improve blood glucose control.
• Schools will do one or more of the following:
• Become Healthier US School Challenge (HUSSC) certified at the Gold with Distinction, Gold, Silver, or Bronze level.
• Improve their wellness policy.
• Partner with Extension to provide nutrition education in the classroom and for the parents.
• Incorporate techniques from the Smarter Lunchrooms Initiative to increase the consumption of healthier foods.
• Food service professionals (managers and operators) will:
• Increase their food safety knowledge and competencies - Pass a national food safety certification exam that will enable them to lawfully operate/manage a food service operation as required by state law.
• Professional food handlers will:
• Demonstrate food safety knowledge and understanding of food safety concepts.
• Adopt good personal hygiene practice.
• Improve safe handling of foods and thereby reducing foodborne illness risk.

• Consumers and volunteers (of all ages and 4-Hers) will:
• Increase their basic knowledge of safe food handling practices as prescribed by The Dietary Guidelines for Americans 2010, leading to behavioral changes to reduce foodborne illness risk.
• Increase their knowledge and practice of safe food preservation and home canning preparation.
• Increase their knowledge and practice of safe food preparation as prescribed by the American Dietary Guidelines for Americans 2010.

**Financial Management**

• People attending a financial management class will report increased knowledge of key financial topics such as: budgeting, tracking expenses, working with financial institutions, or planning for future goals. An end of class traditional paper or online follow-up evaluation will be used to measure this objective.
• People attending a financial management class will report being better able to evaluate credit offers. An end of class traditional paper or online follow-up evaluation will be used to measure this objective.
• People attending a financial management session, workshop, web conference, or class will report they are more confident in their ability to manage money. An end of session or online follow-up evaluation will be used to measure this objective.
• Floridians of all income levels will increase their access to key financial services.
• Young Floridians will increase there understanding of core financial management topics
• The number of trained volunteers, partners, and educators working with Extension in financial education will increase.
• Program participants will continue to use or increase their use of positive financial practices by adopting one or more of the following practices (Three-five month follow up evaluation sent electronically and /or by postal mail will be used to measure this objective):
• Tracking personal expenses,
• Using a spending plan
• Opening an account with a mainstream financial institution
• Engaging in protective behaviors to prevent against identity theft
• Depositing money into savings and investing vehicles
• Reducing debt

**Housing and Community**

• Facilitate occupants in developing a plan for increasing the overall performance of their dwellings and living situation via a detailed examination of:
• minor home-conservation measures, home maintenance and operations, personal routines and practices
• Facilitate citizens and public administrators in developing a plan for increasing the overall performance of their communities and living situation via a detailed examination of:
• neighborhoods, public schools, public services
• Facilitate the realty, rental, and homebuilder industries by:
• helping its members understand what "post-bubble" dwellers look for when shopping for a home/community
• assisting occupants to understand how they can maintain their dwellings at a "move-out-ready" level

• Program participants will continue to use or increase their use of positive financial practices by adopting one or more of the following practices (Three-five month follow up evaluation sent electronically and /or by postal mail will be used to measure this objective):
• Tracking personal expenses,
• Using a spending plan
• Opening an account with a mainstream financial institution
• Engaging in protective behaviors to prevent against identity theft

- Depositing money into savings and investing vehicles
- Reducing debt

**Human Development and Family Relationships**

• Child/Youth Development: Improve parents' and caregivers' knowledge of child and youth development and effective parenting/ caregiving practices.
• Family Success: Strengthen couple, family, interpersonal and intergenerational relationships across the life cycle.
• Healthy Lifestyles: Improve personal, emotional, and social health and well-being across the lifespan.

**Aging**

- adopt healthy lifestyles that enable them to remain active and well into their later years;
- successfully meet emotional challenges and adjustments;
- maintain positive and caring relationships in later life;
- prepare for retirement, long-term care, and end-of-life decisions;
- make home and community adaptations that can accommodate Floridians of any age.

## 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 |
| 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 |
| 2018 | 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 |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Newsletters |
| ● Group Discussion | ● TV Media Programs |
| ● One-on-One Intervention | ● Web sites other than eXtension |
| ● Demonstrations | ● Other 1 (radio) |
| ● Other 1 (telephone calls) | |

**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 still being heavily impacted by the economic situation. Public higher education in Florida has lost more than 50% of state funding and has been impacted by other losses caused indirectly by the economic down turn. Issues related to Medicaid are also expected to impact us heavily. Changes in state, county and federal appropriations can also affect the outcomes related to the Florida land-grant mission. Because of limited resources in Florida and continuing devolution Extension 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. 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 Extension programs.

## 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) including the use of program reviews. 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**

Strengthening urban and rural community resources and economic development

**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 |
| 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 |
| 2018 | 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 |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Newsletters |
| ● Group Discussion | ● TV Media Programs |
| ● One-on-One Intervention | ● Web sites other than eXtension |
| ● Demonstrations | ● Other 1 (radio) |
| ● Other 1 (telephone calls) | |

### 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
usceptible 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 # 3**

### 1. Name of the Planned Program

Preparing youth to be responsible citizens and productive members of the workforce

### 2. Brief summary about Planned Program

**Preparing youth to be responsible citizens and productive members of the workforce**

**Priority 1: Youth Development**

**Today's youth are tomorrow's citizens, consumers, parents, and leaders. Florida Extension's 4H Youth**

Development Program offers ageappropriate, learnbydoing educational opportunities that complement K-12 education to develop knowledge, life skills, and leadership abilities in Florida's youth. These qualities empower youth to positively influence their communities and become contributing members of society.

Community members, leaders, and local officials are very concerned about opportunities for youth in their communities. Florida Extension 4H programs must continue to work to supplement formal education, enhance life skills development, and prepare youth for tomorrow's workforce. Participation in 4H clubs provides the positive, supportive environment youth need to succeed. School enrichment, day and residential camps, and other types of programs introduce youth to longerterm learning experiences. Through participation in 4H clubs and other educational activities, efforts will focus on meeting the highest priority educational needs: helping youth develop science, technology, engineering, and math (STEM) literacy; helping youth develop an interest in learning that will equip them to succeed in a rapidly changing society and global economy; teaching youth responsibility, developing their ability to become leaders, and engaging them in their communities; helping youth develop healthy lifestyles; and encouraging youth to get outdoors to appreciate nature, agriculture, and natural resources.

**Priority 2: Developing organizational and volunteer systems to support youth development**

Research shows that the continuous presence of caring adults is critical to achieving positive youth development. With limited faculty and staff, volunteers can assist in reaching more youth. Florida 4-H is committed to developing youth and adult volunteers, valuing inclusiveness, and increasing the diversity of program participants. Florida Extension will provide training needed for volunteers to serve youth and their communities. In addition, Florida Extension will work to provide the support needed for volunteerled organizations to be effective in helping the 4H Youth Development Program meet its mission and goals. As an integral part of the landgrant mission, the 4-H program is relevant to diverse youth, achieves positive youth development, and, in the process, also provides opportunities for adults to develop their own leadership and workforce skills. Because 4-H is the youth development program of the Florida Cooperative Extension Service, UF and FAMU Extension faculty and staff will contribute their expertise to 4H to achieve Extension's youth development goals.

**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 :** 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

Operations for youth that supplement formal education, enhance life skills development, and prepare youth for tomorrow's workforce have been assessed as priorities in Extension 4-H Youth Development Programming. Studies have found that youth who participate in 4-H are less likely to engage in at-risk behaviors (such as smoking, drinking, bullying, etc), contribute more to their family and community, and state they are more likely to attend college (Lerner et al, 2012). All these factors lead to productive, well-adjusted citizens prepared for the workforce. By introducing youth to school enrichment, day and residential camps, and other types of programs in 4-H, youth are more likely to become engaged and join 4-H clubs. Through participation in 4-H clubs and other educational activities, efforts focus on meeting the highest priority needs: helping youth develop science, technology, engineering and math (STEM) literacy: helping youth develop an interest in learning that will equip them to succeed in a rapidly changing society and global economy; teaching youth responsibility, developing their ability to become leaders, and engaging them in their communities; helping youth develop healthy lifestyles ; and encouraging youth to get outdoors to appreciate nature, agriculture, and natural resources.

The Florida Youth Development Program relies on trained faculty, staff and volunteers to provide positive youth development experiences. These experiences include direct mentoring and education of youth, as well as the coordination and management of events and activities. Research has shown that in addition to formal education, youth need multiple non-formal educational experiences to develop critical life skills such as decision-making, responsible, interpersonal skills, a service ethic, and social skills (Boyd, Herring and Briers, 1992; Cantrell-Jordan, Heinsohn, & Doebler, 1989; Seevers & Dormody, 1994). Youth who participated in the 4-H youth development program have greater levels of contributions to their communities; school engagement,; participation and interest in science, engineering, and technology; and healthier habits than youth involved in any other out-of school time activities or none at all (Lerner et al, 2012).

Nationwide, more than one-third of volunteers that provided service in one year did not donate any time to a charitable cause the following year. A national volunteer study concluded that fewer than half of nonprofits that rely on volunteers have adopted best practices for volunteer management. Eisner, Grimm, Maynard, and Washburn (2009) found that organizations that rely on volunteers to accomplish their mission have invested considerable financial resources to train, lead and support volunteers. Financial investments by organizations to support volunteers include facilities, technology, utilities, and other

infrastructures, faculty/staff salaries and benefits, insurance, and training supplies.

The 4-H Youth Development Program provides a significant opportunity for youth to excel socially and academically. With limited faculty and staff, volunteers can assist in reaching more youth. In Florida trained volunteers provide 4-H experiences for youth. Successful engaging and retaining volunteers requires a systemic approach. A systematic approach includes:

- Identifying opportunities for volunteer involvement in county 4-H programs
- Recruiting the right volunteer for the right role
- Orienting and training volunteers for success in 4-H
- Supporting volunteers in their respective roles
- Evaluating volunteers and the volunteer program (Boyce, 1971; Bussell & Forbes, 2003; Culp, Deppe, Castillo, & wells, 1998)

**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**

**Short- term Goals**

- **Gain knowledge and develop competencies in science, technology, engineering, and math (STEM), healthy lifestyles, citizenship and leadership**
- **Develop workforce readiness (life) skills that will prepare youth to make positive choices and communicate effectively; responsibility, critical thinking, teamwork, problem solving, goal setting and working cooperatively with diverse co-workers.**
- **Foster an interest in learning**
- **Youth and adult volunteers will increase their knowledge and skill on how to intentionally and appropriately apply the principles and best practices that result in positive development of youth**
- **As a result of their experiences with the 4-H youth Development Program 4-H volunteers will indicate a positive attitude about continuing to partner with youth for program delivery**
- **4-H volunteers will value diversity, be accepting of differences, and inclusive of underrepresented audiences**

**Medium- term Goals**

- **Youth will make positive choices by demonstrating responsibility, critical thinking skills, financial literacy, goal setting/achievement teamwork**
- **Youth will effectively communicate**
- **Youth will apply content knowledge (mastery) in science, technology, engineering, and math (STEM), healthy lifestyles, and citizenship/leadership**
- **4-H club volunteer leaders and 4-H chaperones will intentionally and appropriately apply the principles and best practices that result in positive development of youth by creating a sense of belonging in a safe and supportive environment as evidenced by annually surveying youth perceptions of 4-H club leaders and chaperones.**
- **4-H volunteers will follow appropriate policies, procedures and safety guidelines as demonstrated by utilization of proper risk management practices, successfully completing and submitting all county and state required documentation on time.**
- **4-H volunteers in leadership roles will work cooperatively and engage positively in the decision-making processes that affect the 4-H youth development program as measured by a survey of volunteers and youth in leadership roles, observations or surveys of effectiveness of meetings, achievement of program goals, etc.**
- **4-H volunteers will work cooperatively with Extension faculty/staff to achieve a diverse county 4-H Youth Development Program that is inclusive of underrepresented audiences.**

## 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 |
| 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 |
| 2018 | 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 partnerhsips

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

-Project training workshops/seminars will be held.

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

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

**Extension**

| Direct Methods | Indirect Methods |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Newsletters |
| ● Group Discussion | ● TV Media Programs |
| ● One-on-One Intervention | ● Web sites other than eXtension |
| ● Demonstrations | ● Other 1 (radio) |
| ● Other 1 (telephone calls) | |

**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 still being heavily impacted by the economic situation. Higher Education in Florida has lost more than 50% of state funding and has been impacted by other losses caused indirectly by the economic down turn. Issues related to Medicaid are also expected to impact us heavily. Changes in state, county and federal appropriations can also affect the outcomes related to youth. 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.

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.

## 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) including the used of formal program reviews.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

Global Food Security and Hunger

### 2. Brief summary about Planned Program

Agriculture, horticulture, natural resources and related industries are vital components of Florida's economy. Florida's 47,500 farms produce nearly 300 different commodities on more than 9.2 million acres. Total economic contributions for agriculture, natural resources and related food industries broadly defined to include allied inputs and services, manufacturing and distribution, and nature-based recreation, were 2.01 million jobs, representing 14% of the state workforce, and $109 B in value added, representing 10.3% of state Gross Domestic Product. These industries are extremely diverse. More than 90% of Florida's producers are small farmers, including limited-resource farmers. It is imperative that our agricultural and horticultural producers continue to be economically and environmentally sustainable, as these enterprises provide the products that increase our quality of life and provide access to safe and nutritious food.

Florida's agriculture and horticulture producers face increasing challenges, including rapidly changing technologies, local-to-global markets, climate extremes, varying consumer demands, and increasing regulations. Hence, Florida Extension's educational programs must provide farmers, ranchers, and producers with the research-based knowledge they need to improve sustainability and profitability. Adoption of new technologies, new production practices, alternative crops, new marketing options, and a trained labor force will result in viable agricultural and horticultural production that continues to be sustainable and profitable and contributes to the state's economy.

Extension educational programs throughout the state have addressed but are not limited to:

- Food safety education including Good Agricultural Practices (GAPs), HAACP, cottage industry and safety plans for small farms which will increase local buying and access to safe and nutritious food.
- Food system development such as farmer's markets, community gardening, food hubs, processors, and wholesale/direct markets increasing access to safe and affordable food.
- Beginning farmer and rancher classes, food manager certification, marketing and business planning and consumer education to enhance understanding of food systems in local communities that ensure access to safe and affordable food.
- New technologies that will result in increased yields, reduced inputs, increased efficiency, increased economic return and conservation of resources.
- Best management practices resulting in increased adoption of irrigation and nutrient practices reducing impacts to natural resources and maintaining economic viability.
- Development and use of decision tools that decreased the risk of farm operations due to climate variability and change.
- Pest management information to increased detection and integrated management of pests that will ensure economic crop production and less crop losses due to pest.
- Basic information to decision makers on Florida's agriculture industries that inform and shape decision making processes that will ensure food access and distribution.

These programs addressed these broad NIFA issues: (1) enhanced capacity of a sustainable global food system including new varieties, animals and technologies; (2) more sustainable, diverse and resilient food systems across scales; (3) improved national and global capacity to meet growing food demands;

and, (4) increased access to safe and affordable food.

**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 :** 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 |
| 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 |
| 2018 | 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 |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Newsletters |
| ● Group Discussion | ● TV Media Programs |
| ● One-on-One Intervention | ● Web sites other than eXtension |
| ● Demonstrations | ● Other 1 (radio) |
| ● Other 1 (telephone calls) | |

### 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 # 5**

**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 |
| 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 |
| 2017 | 0.0 | 0.0 | 0.0 | 0.0 |

| Year | Extension | | Research | |
|---|---|---|---|---|
| | 1862 | 1890 | 1862 | 1890 |
| 2018 | 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 |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Billboards |
| ● Group Discussion | ● Newsletters |
| ● One-on-One Intervention | ● TV Media Programs |
| ● Demonstrations | ● Web sites other than eXtension |
| ● Other 1 () | ● 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 # 6**

**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 |
| 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 |
| 2018 | 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 |
|---|---|
| ● Education Class | ● Public Service Announcement |
| ● Workshop | ● Newsletters |
| ● Group Discussion | ● TV Media Programs |
| ● One-on-One Intervention | ● Web sites other than eXtension |
| ● Demonstrations | ● 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 # 7**

**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 |
| 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 |
| 2018 | 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 Andress.

• Seek grant funding and/or support for canning supplies for training

• Facilitate county faculty mentoring program to support for 4-H and adult community training

• Prepare and review publications as needed.

Key educational methods: Continuing food safety education for food handlers

• Serv Safe® Training and Certification for food service managers/operators

• Food service workers/food handlers training (SafeStaff ®or equivalent) on site or elsewhere

• Use media to raise awareness and classes/programs to increase knowledge and competency of consumers and volunteers on safe food handling

• Face-to-face training: Food safety and quality update for FCS county faculty; training by state government officials on food businesses regulation; other emerging programs and issues.

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

**Extension**

| Direct Methods | Indirect Methods |
|---|---|
| ● Education Class<br>● Workshop<br>● Group Discussion<br>● One-on-One Intervention<br>● Demonstrations | ● Public Service Announcement<br>● Newsletters<br>● TV Media Programs<br>● 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 # 8**

**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 biodesil 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 |
| 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 |
| 2018 | 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 |
|---|---|
| • Education Class<br>• Workshop<br>• Group Discussion<br>• One-on-One Intervention<br>• Demonstrations | • Public Service Announcement<br>• Newsletters<br>• TV Media Programs<br>• 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 # 9**

**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 |
| 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 | 0.6 | 0.0 |
| 2018 | 0.0 | 0.0 | 0.6 | 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 # 10**

### 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 :** Intermediate (One to five years)

**4. Program duration :** Medium Term (One to 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 |
|---|---|---|---|---|---|
| 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 technolo-gies 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 environmen-tally 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, subsurace 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 maintainance 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 |
| 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 |
| 2018 | 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 |
|---|---|

| | |
|---|---|
| | |

**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 adversly 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 # 11**

**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 fami-lies, 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 stud-ies 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 |
| 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 |
| 2018 | 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 # 12**

### 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 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 :** 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 |
| 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 |
| 2018 | 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/ Stakholders

## 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 # 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 |
| 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 |
| 2018 | 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--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 must 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 |
| 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 |
| 2018 | 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 # 15**

**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 |
| 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 |
| 2018 | 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