2007 Florida A&M University Research Plan of Work

Brief Summary about Plan of Work

Florida is one of the fastest growing states within the United States, currently ranking fourth in population growth after California, New York and Texas. Most of this growth is taking place in the major urban areas of the state. However, agriculture plays a very significant role in Florida's economy and remains a viable force to-date. Florida agriculture is diverse as well as unique in nature in terms of farm size, crops, and economic investments. It represents a complex group of industries that produce a wide variety of food crops, livestock, vegetables, fruits, ornamental horticulture, forestry, aquaculture, and related agricultural commodities.The changing demographics of the state and the consequent needs of our stakeholders dictate that we develop appropriate research programs which would address such issues. The small farmer in Florida is experiencing difficulties because of the rising cost of inputs, marginal profits, land costs and the loss of land to development. Recent trends in the overall economy of the nation have placed many small farmers in a situation of extreme economic stress. Florida A&M University's (FAMU) research programs are particularly geared for applicability to smaller part-time or limited resource farmers. Sixty percent of Florida's farms fit the definition of a "small farm," which makes FAMU's mission particulary crucial in enhancing the overall economy of the state. Special attention was paid to the needs of small farmers in the proposed Plan of Work for Florida A&M University for the period 2007-2011.
The Plan of Work was prepared after receiving inputs from various sources through surveys, interviews, and direct contacts with stakeholders. The identified needs were matched with the scientific expertise available at FAMU, plans were developed and the available resources were then approriated accordingly. The major areas of need included: Viticulture and Small Fruits, Water Quality and Quantity, Control of Pests (especially, biological control), Alternative Enterprises (e.g., Statewide Goat Program) and Niche Crops, and certain Rural Development Issues. Further details are provided for each of these planned programs in this document.

Estimated number of professional FTEs/SYs to be budgeted for this plan.

Year	Extenion		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	16.0
2008	0.0	0.0	0.0	18.0
2009	0.0	0.0	0.0	19.0
2010	0.0	0.0	0.0	19.0
2011	0.0	0.0	0.0	19.0

Merit Review Process

The merit review process that will be employed during the 5-Year Plan of Work cycle

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

Brief explanation

Florida A&M University has a well established process in place to review and monitor the quality and the accountability of research program. In addition to the reviewers mentioned above, the proposed research will be monitored through annual evaluation of faculty's planned program; potential impact on stakeholders; presentation and publication of scientific findings; annual report of accomplishments; and, periodic CSREES reviews.

Evaluation of Multis & Joint Activities

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

Florida basically has three distinct agroclimatic regions. The Southern part of Florida produces ornamentals, nursery crops, vegetables, tropical fruits and aquaculture commodities; the Central part has extensive citrus crops, animals, row crops and small enterprises; the Panhandle area, where Florida A&M University is located, has farmers involved in a mix of enterprises including: cattle, goats, tomatoes, peppers, grapes, peanuts and other speciality crops. Therefore, the critical issues are different for all three regions. Since most of the farmers in the Panhandle area are small producers, FAMU concentrates on their needs and through the proposed plan will try to address their concerns. The main issue is to enhance the economic returns for producers in this area. Research on this aspect will include: Grape production, meat goats, tomato and peppers, and other alternate crops. Water quality and environmental issues are major concerns and so is the quality of life for rural residents, planned research will address these issues.

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

Florida A&M University, an 1890 Land-Grant university, has traditionally worked with the under-served and under-represented groups involved in agriculture and rural development. FAMU's Research Programs are developed in close association with its extension component. The planned programs are geared toward meeting the identified needs of small/limited resource farmers. Research is proposed for developing information on niche crops, alternate enterprises and value-added products, which would enhance the economic returns for small producers. The proposed research on rural issues will help in identifying the needs of under-served, elderly and other rural residents and the ways in which local and state agengies are meeting such needs.

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

Expected outcomes of the planned program include: greater profitability and productivity for North Florida agricultural producers, better crop production and management information, better animal production and management information, reduced costs, enhanced environmental stewardship, reduced use of chemicals (fertilizers and pesticides) and further integration of research, teaching and extension programs.
Potential Impacts include: Better informed grapes and vegetable growers, more acreage of grapes and vegetables, healthy animals and reduced cost of production, adoption of "Best Management Practices," availabiltiy of new niche crops, novel biological control agents, better environmental conditions and well trained undergraduate and graduate students.

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

The planned program will be annually reviewed to redirect and realign the efforts to ensure that it remains effective and efficient. Available resources (federal, state and local), will be allocated based on the identified needs and priorities. By incorporating the stakeholder issues and the recommendations made by the program advisory council, it is eveident that the resources will be used where they are needed. Also, the Center concept at FAMU, where we bring a number of scientists together, tends to be more effective in solving problems than individual investigators.

Stakeholder Input

1. Actions taken to seek stakeholder input that encourages their participation (Check all that apply)

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

Brief explanation.

Input from stakeholders was sought and received from multiple sources and at different levels. College held several public events during the year to gether information from stakeholders. A comprehensive survey of stakeholders identified the needed research. Each of the planned program areas have established advisory councils to help them develop, implement and monitor research.

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
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

Attempts were made to include as many diverse groups as possible. Special attention was paid to the under-served clientele such as low income farmers, minority groups and small-scale producers. Field days were very useful in identifying the stakeholder groups. Input was also sought from the extension workers in identifying the stakeholders. Listening sessions at commodity group meetings were helpful in formulating needs assessments.

2(B). 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. Methods for collecting Stakeholder Input

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

Brief explanation

A comprehensive survey of the clientele we serve was undertaken to assess the future research needs. Special booths were set up at field days to receive input from small-scale farmers. Extension agents were interviewed to learn about the problems out in the field. Advisory councils made up of traditional and non-traditional groups, external to the University, were established at the college level as well as at the individual planned program level. Meetings of the advisory councils will be held biannually to receive their input.

3. A statement of how the input will be considered

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

Brief explanation.

Input received from stakeholder groups was incorporated into individual planned programs as well as the total Plan of Work. Research priorities and specific recommendations/action items were developed from the proceedings of the college advisory council. Planned programs were designed to address the identified needs and the budgets were prepared accordingly. Seed money will be provided for the identified emerging issues.

1. Name of the Planned Program

Viticulture and Small Fruit Research

2. Program knowledge areas

- 205 Plant Management Systems 50 %
- 201 Plant Genome, Genetics, and Genetic Mechanisms 25 %
- 203 Plant Biological Efficiency and Abiotic Stresses Affecting Plants 25 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

To address the needs of Florida's grape growers, Florida A&M University established a Center for Viticulture and Small Fruit Research in 1978. The Center conducts research and provides service and support that will enable the viticulture industry in Florida become a viable enterprise. Ongoing research projects range from identifying the genetic markers of important viticultural characteristics for developing disease tolerant grape cultivars to evaluating the cultural practices for efficient vineyard management. Another effort is the development of a seedless muscadine with large berries and good quality fruit that will have edible skin and good disease tolerance for making wine, juice, and jelly. Close cooperation and working relationship exist between the program and the stakeholders, i.e., the grape growres, who are the final beneficiaries of the research. Planned program is geared towards developing new and improved muscadine grape cultivars and small fruits such as blackberries, raspberries and others.

6. Situation and priorities

The Florida Legislature identified viticulture as an underdeveloped industry with great economic potential within the state. The grape industry in Florida has been hampered by the fruit quality from the currently available commercial varieties. Other major problem is the susceptibility of grapes to the Pierce Disease. There is a need to improve the quality of Florida grapes(muscadines) in terms of disease and pest resistance, seedlessness and development of fresh as well as wine grapes. To address the needs of Florida's Grape Industry, Florida A&M University established the Center for Viticulture and Small Fruit Reseach in 1978. The Center has three prong approach, i.e., research, public service and training of students at graduate and undergraduate levels.

7. Assumptions made for the Program

The Florida Legislature provides an annual appropriation to the Center to conduct research and extension work in grapes. Additional funds are allocated through the Evans-Allen Program. The Center has developed a number of research projects with the assistance of the Florida Viticultural Advisory Council and Florida Grape Growers. The Center has well-established vineyards and four laboratories where researchers work on grape genomics and breeding, grape biotechnology, grape product development and small fruit evaluation. Consumption of Florida grapes and wines is on the rise, so is the acreage and number of wineries. With incresing population of the state, this trend will continue. Also, many of the citrus producers, especially in the north central part of Florida, are slowly moving towards other enterprises such as grapes. The major hindrances in grape production in Florida include: availability of seedless muscadine cultivars, appeal and preference for Florida muscadine grapes and grape products, initial start up costs for establishing a vineyard and lack of information on vineyard management practices. The proposed research program at Florida A&M University will address these problems through several ongoing studies.

8. Ultimate goal(s) of this Program

Develop new and improved grape cultivars for Florida's grape growers.
Develop seedless muscadine grape varieties.
Promote the marketability of Florida grapes and value-added products.
Explore the suitability of small fruit crops (Blackberries, Raspberries, etc.) for north Florida.

9. Scope of Program

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

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- Yes

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	5.0
2008	0.0	0.0	0.0	5.0
2009	0.0	0.0	0.0	6.0
2010	0.0	0.0	0.0	6.0
2011	0.0	0.0	0.0	6.0

Outputs for the Program

13. Activity (What will be done?)

Research Projects and studies, Research Reports and Publications, Presentations, Graduate Student Training, Research workshops, Growers Meetings and Field Days, Public at-large field day, Participation in Florida Grape Growers Association, Interface with the Florida Department of Agriculture and Consumer Services

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

Extension	
Direct Method	Indirect Methods
• {NO DATA ENTERED}	• {NO DATA ENTERED}

15. Description of targeted audience

Grape growers in general, Florida grape growers in particular, Small fruit producers, Small acreage owners, Consumers, Extension workers, Plant breeders and biotechnologists, grape processors and wine makers.

16. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	1
2009	0
2010	1
2011	1

18. Output measures

Output Text

Research and Extension publications; Grant proposals submitted and funded; Dissemination of results to stakeholders; Training of graduate and undergraduate students.

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Greater profitability and competitiveness; Increased value of grape commodities; Improved cooperation between the industry, state and federal agencies resulting in transfer of technology that will lead to growth and higher ecnomic returns for Florida Grape Growers; Increased acreage of grapes for fresh fruit and processing; Better trained graduate and undergraduate students.

Outcome Type: Medium

2007 Target: 0

2008 Target: 0

2009 Target: 0

2010 Target: 0

2011 Target: 0

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Competing Programatic Challenges

Description

Main external factors would be: infestation of insect/disease/pests; unfavorable weather conditions, declining demand for the products.

21. Evaluation studies planned

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

Description

The evaluation studies will be conducted during and after the implementation of planned program. Progress made on each of the goals will be determined annually and appropriate modifications in the plan will be made to achieve proposed goals at the end of the plan.

22. Data Collection Methods

- Sampling
- Mail
- Telephone
- Structured
- Case Study

Description

The data collection will depend on the type of the study. The experimental studies will follow standard statistical procedures. The marketing and consumer studies will employ survey techniques. Yield related studies will depend on the sampling.

1. Name of the Planned Program

Water Quality Research

2. Program knowledge areas

- 112 Watershed Protection and Management 25 %
- 111 Conservation and Efficient Use of Water 75 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

The protection and improvement of our water resources is one of the most pressing national priorities of the 21st century. This is particularly true in Florida, where about one-third of the land is wetland at different times of the year, and most of the drinking water comes from shallow underground aquifers. Hence, the drinking water supply is highly vulnerable to agricultural as well as urban runoff. With the increasing population in the state, there is much demand for fresh water from agriculture, industry and public-at-large. Both, the quality and the quantity of water need to be protected. Agriculture uses almost 70 percent of all freshwater consumed within the state. It also poses major threat to the quality of water because of nutrient runoff. There is a great need in the state to improve the understanding of the water usage and to research the intricate relationship between agricultural practices, land use, wetlands and water quality. Flprida A&M University established a Center for Water Quality in 1995 to address these issues. Since then, air quality area has also been added to the center. Active support has been received from two USDA agencies (Forest Service and Natural Resources Conservation Service), in addtion to CSREES.

6. Situation and priorities

Florida, one of the fastest growing states in the nation is faced with major challenges in the protection and enhancement of its water resources. As the population increases, so is the demand for water supply and wastewater treatment. More than one-half of freshwater used in the state comes from underground aquifers. Since most of these aquifers are quite shallow (10-12 ft below the surface), potential sources of water contamination are many. Surface water bodies including lakes, streams, rivers, irrigation canals and wetlands are equally susceptible to pollution by agricultural activities, animal waste disposal, landfill seepage and aquatic weeds. The Center for Water and Air Quality at Florida A&M University is engaged in addressing many of these issues. The Center Advisory Council consisting of stakeholders and representatives from state, local and federal agecies have provided input for planning research activities undertaken by the center. The center priorities include: nutrient management to reduce runoff losses, protection of Florida wetlands, monitoring water quality in various aquatic systems, and phytoremediation of hazardous chemicals in water.

7. Assumptions made for the Program

Florida is a leading producer of a number of agricultural crops, including citrus and vegetables; application of fertilizers to these crops can result in the pollution of ground water by excess nutrients. In addition, waste from livestock operations can cause runoff into groundwater. Researchers plan to study the relationships between agricultural practices, land-use, wetlands and water quality, and develop best management practices to reduce pollution from all agricultural sources. The Center for Water Quality at FAMU will continue to receive additional funding from from the two USDA agencies, Forest Service and Natural Resource Conservation Service to address some of these issues. The Water Analysis Laboratory (FAMU) which was set up 4 years back is fully funtional and will continue to provide the needed technical support for research in this area.

8. Ultimate goal(s) of this Program

Protect and enhance the quality and the quantity of Florida's water.
Study efficient nutrient management and reduce nutrient runoff into water bodies.
Protect Florida's wetland through better understanding of nutrient cycling.
Develop biomonitoring methods to study water quality.

9. Scope of Program

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

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- No

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	5.0
2008	0.0	0.0	0.0	6.0
2009	0.0	0.0	0.0	6.0
2010	0.0	0.0	0.0	6.0
2011	0.0	0.0	0.0	6.0

Outputs for the Program

13. Activity (What will be done?)

Close coordination will be established with the Florida Department of Environmental Protection, US Forest Service and the Natural Resource Conservation Service in designing and executing research to study water quality issues within the state. Most of the research sites will be located in north Florida. A regional water quality symposium will be held in 2009 to bring 1890 scientists and others together to discuss issues related to aquatic systems. Reserach results will be disseminated through publications and presentations at the scientific meetings. Also, major involvement of extension agents and graduate and undergraduate students will be sought.

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

Extension	
Direct Method	Indirect Methods
• {NO DATA ENTERED}	• {NO DATA ENTERED}

15. Description of targeted audience

Small and limited resource farmers, natural resources extension specialists, environmental protection personnel, aquatic biology scientists, wetland researchers, local, state and federal agencies

16. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	1
2011	0

18. Output measures

Output Text

Research publications
Grant Proposals Submitted and Funded
Dissemination of Results to Stakeholders
Training of Graduate and Undergraduate Students

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Reduction in the amount of agriculture runoff into groundwater; Adoption of program recommendations for improving water quality; Preservation of Florida's water resources;Improved environmental stewerdship; Better understanding of aquatic fauna; Well-trained graduate and undergraduate students in soil and water sciences.

Outcome Type: Short

2007 Target: 0

2008 Target: 0

2009 Target: 0

2010 Target: 0

2011 Target: 0

20. External factors which may affect outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Public Policy changes
- Government Regulations
- Competing Programatic Challenges

Description

The Water Quality Program being an environmentally sensitive program may be affected by several external factors. The chief among them: changes in land-use pattern, state environmental regulations, climatic conditions including extreme shifts due to hurricanes, draining of wetlands, etc.

21. Evaluation studies planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

Description

Evaluation of ongoing planned studies will be conducted during and after the implementation of the program. Before-After and multiple points will also be used to determine the effectiveness of the planned program. Final evaluation will be completed at the end of the studies.

22. Data Collection Methods

- Sampling
- Mail
- Structured
- Observation
- Other

Description

Data will be collected through well designed research studies and experiments. Appropriate statistical methods will be used in implementing and analysing the results of the study.

1. Name of the Planned Program

Biological Control of Insect Pests

2. Program knowledge areas

- 215 Biological Control of Pests Affecting Plants 100 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

Florida has a warm humid climate, a diversity of natural ecosystems, and is one of the leading agricultural states. As a result, it is particularly vulnerable to wide variety of insect pests and weeds. While effective pest control is critical in all crop production systems, it is becoming increasingly clear that execessive reliance on chemical pesticides is not the answer. The need to adopt sustainable, less pesticide intensive pest control practices is evident. Biological control, or the control of pest species using natural enemies, is a prime component of sustainable agriculture. Planned program in this area will address issues related to biological control.

6. Situation and priorities

At the dawn of the new Millennium, the crop acreage under IPM was estimated to be far below the national commitment set under the USDA/EPA initiative to have 75 percent of total acreage under IPM by the year 2000 (GAO,2001). While the report elicited much debate, it is clear that the need for development of alternatives to chemical pesticides remain high. In organic farming systems, the challenges are even greater due to the stringent production requirements. In North Florida, vegetable production is an important activity and small farmers produce a range of vegetable crops. Many of them are converting to organic farming and are in need of viable biological control options. Biological control in its various forms is a key tool underpining management efforts against the wide array of pests. A five-year research and development effort is proposed to overcome the technical and policy constraints to the increased application of biological control against economically important indigenous and non-indigenous pests. The Center for Biological Control at Florida A&M University , established in 1998, with a unique partnership between FAMU, ARS and APHIS will undertake the proposed work.

7. Assumptions made for the Program

The dynamics of insect populations and their progress towards pest status are often very complex and are influenced by a range of abiotic and biotic factors. The proposed work increase awareness and understanding of the state and federal regulations, the International Guidelines for Export, Shipment, Import and Release of Biological Control Agents and Other beneficial organisms. The policy constraints part will emphasize the need for increased knowledge of the regulatory frameworks governing or influencing the implementation of biological control. The Center for Biological Control will continue to receive support from ARS and APHIS, in addition to funding through the Evans-Allen Program. ARS has placed three entomologists on the campus to work closley with the University scientists.

8. Ultimate goal(s) of this Program

The ultimate goal of this planned program is to develop environmentally benign, cost effective and commercially acceptable strategies for utilizing biological control agents against indigenous and non-indigenous pests.

9. Scope of Program

- In-State Research
- Multistate Research

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- No

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	2.0
2008	0.0	0.0	0.0	3.0
2009	0.0	0.0	0.0	3.0
2010	0.0	0.0	0.0	3.0
2011	0.0	0.0	0.0	3.0

Outputs for the Program

13. Activity (What will be done?)

Primary and secondary data will be collected in order to better understand the pest management constraints facing small scale farmers in North Florida. Data base will be developed by using questionnaire survey and semi-structured interviews with farmers. Reserach studies and experiments will be conducted to better understand biology of key pests and biological control agents. Follow up activities include: monitoring field persistence, host/pathogen interactions and the effectiveness of various agents. Field demostrations will be set up for small scale farmers and organic producers. Research activities will be coordinated with extension field staff.

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

Extension	
Direct Method	Indirect Methods
• {NO DATA ENTERED}	• {NO DATA ENTERED}

15. Description of targeted audience

The target audience include: small-scale farmers, organic vegetable producers, organic gardeners, vegetable producers, extension workers and biological control scientists/entomologists

16. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	1
2010	0
2011	1

18. Output measures

Output Text

Identification of biological control agents against indigenous and non-indigenous pests.
Development of effective and efficient IPM strategies.
Research and extension publications.
Training of graduate and undergraduate students

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Better control of pest species using natural enemies; More efficient production and greater profitability; Efficient use of agricultural chemicals (pesticides) by producers; Development of better pest identification tools; Reduction in spread of invasive species; Well-trained graduate and undergraduate students in biological control research area.

Outcome Type: Short

2007 Target: 0

2008 Target: 0

2009 Target: 0

2010 Target: 0

2011 Target: 0

20. External factors which may affect outcomes

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

Description

The major external factors which may affect the outcomes of the planned program include: unfavorable weather conditions which may cause high infestation of insect pests, lack of effective biological control agents, prevelance of natural enemies of identified biological control agents, reduction in funding of current and planned research studies.

21. Evaluation studies planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

Description

The understanding and impact of the standard biological control practices on stakeholders, principally producers of agricultural commodities will be assessed through a survey. A before and after survey of vegetable and /or organic growres is planned. A research timetable along with measureable outcomes will help guide field and lab studies. The advisory council will evaluate the outcomes of research on an annual basis.

22. Data Collection Methods

- Sampling
- Mail
- Structured
- Observation

Description

The data will be collected through insect survey, monitoring and identification. Vegetable and organic production data will be collected by information obatined from the Florida Department of Agriculture and Consumer Services and the survey of producers. Biological control agents will be identified and cataloged.

1. Name of the Planned Program

Statewide Goat Research Program

2. Program knowledge areas

- 502 New and Improved Food Products 10 %
- 311 Animal Diseases 20 %
- 601 Economics of Agricultural Production and Farm Management 20 %
- 307 Animal Management Systems 30 %
- 302 Nutrient Utilization in Animals 10 %
- 301 Reproductive Performance of Animals 10 %

3. Program existence

- Mature (More then five years)

4. Program duration

- Long-Term (More than five years)

5. Brief summary about Planned Program

The future of the goat industry in Florida depends on the profitability and sustainability of goat enterprises, mostly undertaken by the small and limited resource farmers within the state. The raising of goats, as an alternative enterprise in farming systems can provide a profitable and sustainable source of income. However, production costs, the lack of a superior meat goat animal, herd health problems and a narrow market have been determined to be limiting factors in Florida's goat industry. The Statewide Goat Program at Florida A&M University was established to address these identified needs of the Florida goat producers. It has been a joint effort between FAMU Research and extension Programs, with several North Florida counties and the University of Florida/IFAS cooperating. The planned program will continue this effort through research, education and outreach to improve the competitive position of small goat producers in the state. Florida Department of Agriculture and Consumer Services is an active patner in this effort.

6. Situation and priorities

For the past twenty or so years, FAMU researchers have been supporting the economic development of north Florida's farmers through the exploration of non-traditional crop and livestock systems. One program that has done a great deal to help growers is the Statewide Goat Program. This program is designed to assist producers in developing a viable and sustainable meat goat industry. Research addresses critical issues in meat goat production systems, and provides experiential learning for students in small ruminant production. Planned programs will focus on the development of efficient feeding systems, breeding and management practices to improve the quality of goat herds for meat production, herd health management practices, and an organized marketing system to help producers sell their meat goats more efficiently and for a better economic return.

7. Assumptions made for the Program

The dissemination of information and the education of goat producers is an important component of the Statewide Meat Goat program. In the past , the program worked extensively with Florida "native woods" goats, but in recent years the research focus has moved toward an emphasis on imported Boer goats. These South African native goats are hardy, heavily muscled meat goats with many characteristics that have greatly enhanced the quality of local goat herds through careful breeding programs. The major cost associated with goat production has been the cost of drugs to keep the herd healthy. Through the proposed research, it is assumed that these costs will be reduced and the benefit will be transfered to the producers. Also, the market acceptibility of goat products will increase with time.

8. Ultimate goal(s) of this Program

Reduce production costs (mainly, feed and drugs) in raising meat goats
Develop effective herd health plans for goats
Identify alternative markets/strategies for goats and value-added goat meat products
Provide research support for training extension workers and goat producers

9. Scope of Program

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

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- No

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	2.0
2008	0.0	0.0	0.0	2.0
2009	0.0	0.0	0.0	2.0
2010	0.0	0.0	0.0	2.0
2011	0.0	0.0	0.0	2.0

Outputs for the Program

13. Activity (What will be done?)

The Statewide Goat Program is a truly integrated effort. Many activities will be planned to benefit stakeholders and others. These are: Goat Field days, workshops to train goat producers, research studies, field demonstrations, interaction with Florida Meat Goat Association, visits to producers' farms, developing simple publications, working with small and limited resource farmers and helping them in establishing goat production units. Over the years, FAMU has established good rapport with various public and private organizations involved in this area and we plan to continue to build on it.

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

Extension	
Direct Method	Indirect Methods
• {NO DATA ENTERED}	• {NO DATA ENTERED}

15. Description of targeted audience

Small and limited resource farmers, minority farmers, extension workers, goat producers, herd-health professionals, meat goat processors, animal scientists

16. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

Research and Extension Publications
Grant proposals submitted and funded
Dissemination of results to stakeholders
Training of graduate and undergraduate students

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

More use of sustainable production practices; Reduction in feed and health costs; Enhanced marketable products and markets; Greater profitability and competitiveness; Well-trained graduate and undergraduate students.

Outcome Type: Short

2007 Target: 0

2008 Target: 0

2009 Target: 0

2010 Target: 0

2011 Target: 0

20. External factors which may affect outcomes

- Economy
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)

Description

The Statewide Goat Program operates throughout the State of Florida and assists small and limited resource farmers in increasing their incomes. Several external factors may affect: marketing conditions and demand for animals, feed and drug costs, food processing and safety regulations.

21. Evaluation studies planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study

Description

The evaluation of this program will be done jointly with the Cooperative Extension Program, since many of the activities have been planned together. Evaluations will be done before and after, as well as during the studies, to determine the effectiveness of program delivery to small and limited resource farmers. Survey/questionnaire will be used at the Goat Producers Field Day and other meetings to see if research results are being followed and how effective they are. Extension workers will be polled to find out if they are receiving adequate technical information.

22. Data Collection Methods

- Sampling
- Mail
- Structured
- Unstructured
- Case Study
- Observation

Description

Data will be collected by direct observation, visiting demonstration sites and through personal survey. Experimental studies will be planned using sound statistical methodology.

1. Name of the Planned Program

Small Farm, Value-Added Enterprises and Rural Families

2. Program knowledge areas

- 805 Community Institutions, Health, and Social Services 40 %
- 601 Economics of Agricultural Production and Farm Management 30 %
- 803 Sociological and Technological Change Affecting Individuals, Families and Communities 30 %

3. Program existence

- Intermediate (One to five years)

4. Program duration

- Medium Term (One to five years)

5. Brief summary about Planned Program

The goal of the Small Farms, Value-Added Enterprises and Rural families at Florida A&M University is to enhance the social and economic well being of rural and small farm communities through research that facilitates policy decision-making, education and outreach. The planned research program in this area was developed in close consultation with the Cooperative Extension Program at the University. many of these areas overlap with extension and joint appointments with extension faculty have helped in addressing needs in this area. The planned program will implement studies in 13 north Florida counties where most of the small farms are located. Value-added enterprises such as niche crops, vegetables (peppers, tomatoes, melons, cucumbers, etc), exotic crops, small animal enterprises will be evaluated for their profitability and possible adoption by small farmers. Rural families in north Florida face many unique issues, including lack of resources, health care problems, nutrition, housing, transportation and finances. All these issues affect both the health and well-being of families, as well as the well-being of the communities in which they live. Research and extension will work together to address some of these issues.

6. Situation and priorities

Florida's rapid growth in the central and the southern part of the state has caused migration to and from small rural communities of north Florida. Some communities are facing a deterioration of wages, lost jobs and a growing income gap, when compared to urban areas and the national average. This results in a smaller work force, and less capacity for community-wide economic growth. Most of the small farms in FAMU's service area do not produce enough income to sustain families. Therefore, these small farms are now operated by part-time farmers. Also, the rural areas have a much higher population of older people and their needs are different, in terms of assistance programs. The priorities in this program are: increasing small farmers' income through value-added enterprises, assisting rural families/elderly in improving quality of their life and bringing them into the main stream America.

7. Assumptions made for the Program

Florida will continue to grow, population-wise, creating unique problems and challenges, which need to be addressed by the state's land-grant universities. The key to solving community problems is to focus on educating people about their options for the future so they will take local action to solve local problems. In north Florida, where FAMU is located, most of the small farms produce a mix of agricultural commodities and maintain some animals. Organic farming and exotic crops production is on the rise. FAMU has been instrumental in establishing two Farmer's Market (FAMU Cooperative Extension Program) in Tallahasse area aiding to the income of small farmers. It is assumed that small farmers, rural families and limited resource producers need assistance now and in the future to sustain their productivity and profitability.

8. Ultimate goal(s) of this Program

The ultimate goal of this planned program is to enhance the quality of life for rural families and enhance income opportunities for small and limited resource farmers in North Florida.

9. Scope of Program

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

Inputs for the Program

10. Expending formula funds or state-matching funds

- Yes

11. Expending other then formula funds or state-matching funds

- No

12. Expending amount of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2007	0.0	0.0	0.0	2.0
2008	0.0	0.0	0.0	2.0
2009	0.0	0.0	0.0	2.0
2010	0.0	0.0	0.0	2.0
2011	0.0	0.0	0.0	2.0

Outputs for the Program

13. Activity (What will be done?)

The following activities will be undertaken during the implementation of the planned program: research and demonstration studies, field days, visitations to farmers' fields, experimental studies, training of students, publications of research resuts, workshops and conferences.

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

Extension	
Direct Method	Indirect Methods
• {NO DATA ENTERED}	• {NO DATA ENTERED}

15. Description of targeted audience

The target audience for this planned program include: small / limited resource farmers, extension workers, rural residents and families, community groups, vegetable growers, etc.

16. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0

17. (Standard Research Target) Number of Patents

Expected Patents	
Year	Target
2007	0
2008	0
2009	0
2010	0
2011	0

18. Output measures

Output Text

Production practice options for reducing the over-reliance on chemicals; More efficient cultural practices; Increase in economic returns to small farmers; Number of families availing the program recommendations; New value-added ventures; Number of small farmers participating; Number of graduate and undergraduate trained.

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

Outcomes for the Program

19. Outcome measures

Outcome Text: Awareness created

Outcome Text

Adoption of profitable enterprises and practices; Improved quality of life for rural families; More efficient use of agricultural chemicals by producers; Increased economic returns for small farmers; Identification of new value-added enterprises; Well-trained graduate and undergraduate students.

Outcome Type: Short

2007 Target: 0
2008 Target: 0
2009 Target: 0
2010 Target: 0
2011 Target: 0

20. External factors which may affect outcomes

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

Description

Several external factors may affect the outcomes for this planned program. Small farms are more vulnerable than larger enterprises to many of the factors such as: higher input prices, insects/diseases, lack of market, bad weather conditions, low prices, and unavailabilty of labor. Programs on rural issues may be affected by state and federal regulations, reduced funding and changing needs of an aging population.

21. Evaluation studies planned

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Description

The evalution studies for this planned program will be done in consultation with the Cooperative Extension Program. Both, before and after and during the program evaluations will be employed. Case studies will be compared when studying the needs of rural families. Yield and the quality of niche crops will be taken into consideration.

22. Data Collection Methods

- Sampling
- Whole population
- Mail
- Telephone
- On-Site
- Structured
- Case Study

Description

The data collection will include: statistically designed experimental studies, observation and numerical data, quality scale and taste panels, survey data and anlysis.