AREERA Report of Accomplishment
University of Florida/IFAS
Florida A&M University/CESTA
Research (1862) and Extension (1862/1890)
Federal Fiscal Years
2005

April 1, 2006

This is to certify that I have seen and approved the Florida FY2005 Report of Accomplishment for AREERA. This report contains the following:

- UF/IFAS (1862) Research and Extension Report of Accomplishment
- FAMU/IFAS (1890) Extension Report of Accomplishment

This is also to certify that Cheri Brodeur will be submitting this report with our knowledge and approval

Signatures:

Dr. Mark McLellan _____ 3/30/06
Dean and Director of Research

Dr. Charles Magee _____ 3/30/06
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II ~ EXECUTIVE SUMMARY

In 2005 UF/IFAS and FAMU/CESTA met the requirements mandated by the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA). The two Florida land-grant universities continue to work closely together and although FAMU 1890 research reports separately, there is strong collaboration between the two entities.

In an effort to continue to strive towards excellence through interdisciplinary actions and to increase integrated and multi-state programs both universities are making necessary changes to reach their respective goals and mission. Changes in 2005 included the continuation of structural reorganization by UF/FAMU Extension as well as the development of a web-based, IFAS-wide faculty accountability system (unifas) (also used by FAMU Extension faculty as a sign of integration of Extension as a state wide initiative). Changes recommended in the 2003-2004 strategic plans continue to be implemented or refined.

In 2005 a new director and dean for research took command effectively completing a new IFAS administrative leadership. In the past two years Florida land-grant has had a change in the vice-president and all three deans (researching, teaching and extension). Although the triumvirate has always working closely together, Extension and research have begun preliminary plans to show a more formally recognizable and visible integration than has existed in the past.

In the past year, Extension has seen the most structural changes in the continued development in Extension of a team-based structure. The structural complexity and the need for rapid reaction in times of crisis (i.e. hurricanes, invasion by economically devastating pests) makes the use of teams essential in a state like Florida that is comprised of 67 counties which encompass over 54,000 acres of land and has a population of 17 million people with another 58 million visiting the state yearly. These 6 goal team areas include 28 focus teams that are composed of Extension and research faculty from both UF and FAMU as well as many stakeholders and commodity leaders. These teams provide a level of expertise that could not be accomplished by individuals.

Research faculty are also becoming more proficient in writing grant application through educational programs. Trained faculty will then be better prepared for the wider competition of federal grants expected to occur within the next few years.

In early 2005 UF/IFAS completed a faculty accountability system called unifas that culminates five years of effort. This system records all individual activities and publications for research, teaching and extension faculty. FAMU/CESTA is also part of this system. Unifas, as the system is called allows the collection for the first time of focused, state aggregated data including outcomes. Results of the effects of this system can be seen in the state aggregated information found throughout this report. FAMU/CESTA and UF/IFAS through joint reporting in the system are able to integrate

their information or provide it by university depending on the need. In this document UF/IFAS and FAMU/CESTA Extension will be reported as an integrated unit.

Highlighted Programs

Florida is highlighting several of the Extension focus teams this year. Although most focus teams were extremely active and had strong impact the Small Farms Focus Team were especially noteworthy in their activities. The small farms team is made up of faculty from both UF and FAMU who were extremely productive. In particular this team was selected to plan, develop, and produce the first UF/FAMU Virtual Field Day with the topic of Greenhouse Hydroponics. Portions of the taping was done at a previous Field Day in addition to taping 19 other modules to be used in completing the Virtual Field Day production. The greenhouse development and implementation was carried out at NFREC-Suwannee Valley under the general leadership of the Small Farms focus team. The small farms focus team was also involved in the implementation of 43 of Florida's 67 school districts purchasing fresh agricultural produce from local/regional small farmers for school meal programs, thus improving nutritional value of school meals. The team also was instrumental in the development of the Florida Small Farms web site located at http://smallfarms.ifas.ufl.edu which was launched in March 2005. The contact usage was very high immediately, with 540,000 hits tracked for the year.. The number of users per month was about 5,000. Feedback from county agents and farmers has been very positive, making more efficient use of faculty time and providing up to date information to Florida small farmers. The effort of developing the web site was recognized with the James App Achievement Award presented to the team in September of 2005.

In UF/IFAS research many Hatch projects had strong impacts on the state during 2005 and will continue to have impacts in the future. One project completed by UF/IFAS research has developed a mathematical model to describe the coupled effects of both hydrologic and biogeochemical processes in wetlands systems. This model is being used to predict phosphorus mobility in the northern Everglades, where over the past several decades, agricultural drainage waters discharged into the northern Everglades have been enriched in phosphorus (P) relative to the historic rain fall driven inputs. Phosphorus enrichment has occurred in natural soils, and the open water sloughs have become colonized by monospecific stands of cattails. While methods of reducing total P concentrations in the discharge water have been actively pursued, the effects of low-P water moving over the enriched soils have not been fully addressed. Model results suggest that if the proposed input concentration limit of 10 ppb total P is met, the soil-P will be released such that the impacted region will expand spatially. Although P movement through the marsh is slow due to biological sequestration, eventually all of the load over the past several decades will become mobilized through diffusion into the low-P water column. The release of soil P is expected to result in water column concentrations of greater than 10 ppb for over 100 years after targets are met.

In the area of youth development research, Florida Research has recently completed several studies that have examined the effectiveness of prevention programs to reduce youth crime and violence in schools and communities in the major urban area of Palm

Beach County, the fourteenth largest school district in the United States and the location of a major school shooting in the United States. A longitudinal research-based evaluation study was recently completed on the first eight years of the Palm Beach County Youth Court, a program established by the Palm Beach County School District School Police Department for juvenile first offenders. The goal of this program is to keep youth from having a criminal record and from potentially becoming repeat offenders. The evaluation study examined the effectiveness of the court processing, the changing trends in patterns of youth crime and violence, and locations of these crimes. It explored the use of sanctions for these offenses and the impact of significant people on the youth participating in the study. The Palm Beach County Youth Court program provides four benefits to their local community: accountability, timeliness, cost savings, and community cohesion. Research being conducted this year on the effectiveness on the youth court will continue to explore the relationships between the key participants as well as examine risk and protective factors related to these changing trends.

The an effort to develop better multi-state activities Florida county Extension faculty in the Northwest part of the state (panhandle area) have been meeting with land grant faculty from Alabama and Georgia several times a year to plan and schedule strong educational programs. The areas meeting are 4-H, Family and Consumer Sciences, and Agriculture. These meetings have greatly increase the multi-state activity taking place along the long Florida, Georgia, Alabama borders.

Additional examples of the impacts of Florida's UF/IFAS research projects and UF/IFAS and FAMU/CESTA Extension programs can be found in this document.

In the area of multi-state Extension and integrated research and Extension programs, Florida has reached the required 25% involvement in each of these three areas. A specific breakdown of these programs/projects can be found also within this report.

III ~EXTENSION SUMMARIES

Goal 1--To enhance and maintain agricultural and food systems

Summary for Extension Goal 1

Goal 1 – Focus 1

Education programs were conducted for producers, allied industries, government agency personnel, the general public and others in 64 counties. In addition, 15 departmental units and 14 research and education centers reported educational programs in the area of agricultural profitability and the sustainable use of environmental resources. Programs conducted included information on business management, climate and weather, harvesting/processing, pest management/crop protection strategies, marketing, policy and trade issues, environmental stewardship, regulations, value-added processes and products, and production systems and technologies. These types of educational activities were varied and included classroom instruction, clinics, consultations, demonstration/field days, group events and in-service training.

More than 2338,000 individuals participated in these educational programs. Outcomes were based on audience surveys. Of the 4,297 participants who participated in programs that provided certification or licenses, 87.7% of the audience received certification or licenses. In programs designed to improve communication and understanding of agriculture practices and environmental stewardship by agricultural producers, 94.8% of the 1,073 participants indicated improved awareness and understanding. Other outcomes reported with more than 65% of the audience reporting change were appropriate use of fertility programs, appropriate selection of cultivars, varieties, or breeds, use of efficient irrigation systems and technologies, appropriate use of integrated pest management and crop protection strategies, processing systems, precision agricultural systems, safe handling of fuel, fertilizers, and pesticides, water management, and wildlife habitat management.

Days expended by faculty, staff and volunteers for all activities were 17,905. Two hundred and ten faculty were involved in these educational programs. A total of 238,276 individuals participated in these educational programs conducted throughout the year.

In summary, both state and county faculty were involved in the design and delivery of educational program for the agricultural industries in the state. Numerous subjects were addressed in these programs. It is expected that continued excellence in the delivery of educational programs to individuals associated with agricultural enterprises will continue in the future particularly in the adoption of improved practices and technologies throughout the state.

Goal 1 – Focus 2

More than 2 million individuals were provided information as to the value of agricultural goods and services and the economic impact of agriculture and natural resource industries on Florida's economy. Twenty-seven departmental units, extension offices and research and education units were involved in the delivery of information by 50 faculty. Activities involved county agriculture awareness events, demonstrations/field days, fairs/exhibits, and classroom activities. The number of educational activities with the specific outcomes of providing an appreciation for the goods and services from agriculture and natural resources, improving agricultural and environmental

knowledge, providing an increased awareness of the economic impacts of agriculture and natural resource industries and providing an increased awareness of environmental stewardship practices by agricultural and natural resource entities.

Programs were conducted in the area of consumer education and public relations (42), environmental issues (32), and the role of agricultural industries in the local and regional area (34). Most of these activities involved the preparation and distribution of materials to policy makers and the general public through large group events such as fairs, county agricultural awareness events, Ag Ventures, Farm City Week programs, Farm City Days, youth activities and other local and regional events.

Participants who responded to surveys indicated more than 75% increase in awareness to the specific outcomes identified above. This report indicates that faculty are actively working to improve the awareness of the general public on the value of agricultural and natural resources industries and its impact on their everyday lives.

Goal 1 – Focus 3

Twenty faculty from 22 departments, research and education centers, and county offices were involved in providing educational programs in the areas food quality and technology, food safety and handling, food security, regulations, and transportation and distribution. Educational programs were delivered to the target audiences of government agencies, producers, extension faculty, and harvesting, packing, processing, or distribution personnel. Programs were delivered in a number of ways including consultations, demonstrations/field days, and group educational programs.

More than 2000 individuals participated in these educational programs. Specific outcomes identified to be accomplished were knowledge of improved food handling practices during harvesting, packaging, processing, transporting and retail handling, improved food processing procedures, improved food safety and security procedures and improved market potential. Days expended by faculty and staff in the design and delivery of these programs were 542. Outcomes reported were based on audience surveys. Three outcomes, (1) improved food handling practices, (2), improved food processing practices, and (3) improved food safety and security practices showed that 100 percent of the audience filling out surveys improved their knowledge and planned to incorporate identified practices in their operations. Many of these programs involved the delivery of HAACP programs.

In summary, this report indicates that both county and state faculty are working actively with improving procedures for on farm handling of food products, food safety and security, and food processing procedures. It is expected that audiences will continue to increase. Surveys indicate that participants in educational programs are making important changes in their practices.

Goal 1 – Focus 4

Seventy-six faculty from 52 departments, research and education centers, or county offices were involved in the design and delivery of educational programs in the area of plant, animal and human protection. Topic areas included agrosecurity, diagnostics, exotics and invasives, integrated pest management/crop protection strategies and pesticides safety education. Targeted audiences included producers, government agency personnel, professional certified applicators,

and producers. In-service training was also provided to county extension faculty. More than 23,000 individuals participated in 302 educational programs.

Outcomes were based on audience surveys. Particularly important to note are the following outcomes; adoption of appropriate pest management tools, advanced certification and/or license (pesticide license holders and certified crop advisors), aware of pesticide appropriate behaviors, action, procedures, or personal protective equipment, efficient use of landscape management practices, improved diagnostic/identification skills, increased adoption of pesticide safety practices, and improved knowledge and use of worker protection standards. These audiences surveyed reported more than 70% were making appropriate changes. More than 1,400 individuals were able to pass the pesticide certification exam after participating in educational programs.

Educational programs were delivered in a variety of ways including classroom, on-site teaching and demonstration, field days and in-service training for county faculty. A total of 3,075 days were expended by faculty, staff and volunteers in the design and delivery of these educational programs.

In summary, this report indicates that Extension faculty are working actively in the development and delivery of educational programs to clientele in the areas of plant, animal and human protection.

Goal 1 – Focus 5

Faculty from ten units reported conducting 24 educational programs in the area of Safety for Agricultural Operations and Equipment. These programs reached more than 2000 individuals. Many more programs incorporated safety as an element in other programs, i.e. pesticide safety, conducted across the state. Agriculture remains one of the most hazardous occupations in America, and one of the few mechanical occupations for which the home and work site are one and the same. Programming related to agricultural safety often focuses on vehicle and power-machinery uses, the largest single class of fatal hazards in agriculture and on child safety.

Many county faculty incorporated materials from the newsletter, Safety News and Notes, into their own county newsletters. Agricultural safety issues are also incorporated into youth educational programs. Outcomes were based on audience surveys. More than 2000 people were surveyed to determine changes in their behavior relative to five specific outcomes, children becoming aware of the risks associated with handling chemicals, crop producers understanding the risks of tractor operation and prevention means, producers understanding the dangers of agricultural operations, increased self-esteem and confidence in agricultural operations. Rate at which participants indicated a change in behavior was at or near 100% for all the outcomes.

Total days expended in reported activities were 463 directly teaching 2,125 individuals. Seventy-five days were supplied by volunteers. It should be noted that the focus team is aware of numerous events which incorporate safety training which are reported under other focus areas in Goal 1. For instance, more than 450 individuals participated in the Indian River Citrus Seminar in a program that teaches agricultural safety issues, from tractor safety, fire safety, and pesticide safety, to heat stress issues. These are reported elsewhere under citrus programs for grove workers. Therefore this report represents only a portion of Extension's impact on Florida's agricultural workers in the area of farm safety.

It n summary, this report indicates that county extension faculty are working actively in conducting educational programs in operations and farm safety. It is expected that as more faculty become more familiar with the new plan of work and its organization, that more specific outcomes will be reported.

Knowledge Areas: 102, 132, 205, 215, 216, 307, 402, 501, 601, 723
Goal 1 Knowledge Area: 104; 111; 132; 133; 136; 141; 201; 204; 205; 211; 212; 213; 214; 216; 307; 315; 402; 405; 501; 502; 503; 601; 602; 603; 604; 605; 606; 608; 610; 611; 712; 723; 806; 901

OUTCOMES		
Agricultural Profitability and the Sustainable Use of Environmental Resources		
	Total Audience Surveyed	***Percent of Target Audience Making Change***
Outcome		
Advanced certification and/or license	34	100.00%
Alternative enterprises	261	59.77%
Appropriate fertility programs	237	87.76%
Appropriate varieties/breeds/cultivars/rootstock	106	81.13%
Communication and interaction with stakeholders	134	93.28%
Economic Efficiency	109	82.57%
Greater Understanding of domestic and international competition, markets and policies	9	100.00%
Improve Animal Sciences Skills	554	91.34%
Increased public awareness of environmental stewardship practices by agricultural and natural resource entities	11	100.00%
Integrated pest management strategies	82	90.24%
Marketing practices for agricultural products	24	95.83%
Pest control strategies	30	46.67%
Precision agriculture practices	393	74.05%
Processing systems for agricultural products	9	100.00%
Reduced contamination of natural resource systems	700	35.00%
Safe handling of fuel, fertilizers and pesticides	81	98.77%
Waste management practices	22	77.27%
Awareness of Agriculture's Importance to an Economy That Ranges From Local to Global		
	Total Audience Surveyed	***Percent of Target Audience Making Change***

Outcome		
Appreciation for the goods and services from agriculture and natural resources	119	78.15%
Greater political support for agriculture and natural resources	25	100.00%
Increased awareness of economic impacts of agriculture and natural resources	70	100.00%
Increased public awareness of environmental stewardship practices by agricultural and natural resource entities	25	100.00%

Processing, Distribution, Safety and Security of Food Systems

	Total Audience Surveyed	*Percent of Target Audience Making Change*
Outcome		
Improved food handling practices	83	100.00%

Plant, Animal, and Human Protection

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Able to correctly follow pesticide labels.	69	91.30%
Adoption of appropriate pest management tools	56	58.93%
Aware of pesticide appropriate behaviors, actions, procedures or PPE.	128	84.38%
Determine appropriate pesticides and application timing.	421	70.78%
Employers/Managers aware of training resources for chemical safety.	41	100.00%
Improved diagnostic/identification skills/services, landscape maintenance services,	421	70.78%
and pesticide usage.		
Increased adoption of pesticide safety	58	81.03%
Knowledge/awareness of Florida's pesticide laws.	69	92.75%
Pass certification exam	634	66.88%
Pesticide application practices	58	75.86%
Reduced pest levels	58	79.31%
Worker Protection Standards (WPS)	34	100.00%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, State specific

States involved: AL; AR; AZ; CA; CO; DC; DE; FL; GA; HI; IA; IL; IN; KS; KY; LA; MA; MD; MI; MN; MO; MS; MT; NC; NJ; NV; NY; OH; OK; OR; PA; PR; SC; SD; TN; TX; UT; VA; VT; WI; WV; WY

Goal 2 --To maintain and enhance Florida's environment

Summary for Extension Goal 2

Report for Goal 2.1
Water

Thirty-one Extension faculty representing seven academic departments, six Research and Education Centers (REC) and ten counties reported programming in the water focus area.

Four major topic areas were covered – the number in parenthesis represents the number of programs conducted within each topic. a) pollution prevention (16), b) water quality (28), c) water quantity (22), and d) watershed education (25).

Outcomes reported were based on audience surveys. Nine outcomes indicated that 100% of target audience made changes in the following topical programs: Advanced certification and/or license, compliance with laws and regulations, efficient irrigation systems, planning and decision-making processes involving a wider range of stakeholders, stewardship of land and water, water management technologies, water use efficiency, science-based watershed policies, and watersheds – stakeholder input.

One outcome indicated over 90% of participants made changes that led to less pollutants entering surface or ground waters. Two outcomes indicated 80% of participants made change or increased knowledge in water management and water issues.

Faculty expended over 1,239 days. Major areas of activity included conducting field days (215), developing educational materials (199.5), group teaching events (180),
program development (177), demonstrations and field trials (89), and curriculum development (52)

Group attendance for focus areas totaled 3,874 with 60% male 40% female. Ethnicity included 73% White, 9% Hispanic, 9% Black, 1% Asian and 7% unknown.

The target audience and number of programs conducted for each audience were governmental agencies (13), Extension faculty (12), Florida permanent residents (12), Industry (11), Non-Government organizations (11), Educators (10), Producers (9), Natural Resource Managers (8), Florida Seasonal residents (5), Extension support staff (5) and recreational managers (3).

In summary, this report shows that Extension Faculty are conducting a variety of programs at regional, state and county levels that address water issues. The audience surveys indicate that individuals are making changes as a result of participating in these programs.

Report for Goal 2.2
Conservation and Sustainable Use of Freshwater and Terrestrial Natural Resources and Ecosystems

Thirty-three Extension faculty representing six academic departments, four Research and Education Centers (REC) and thirty-one counties reported programming in the Conservation and Sustainable Use of Freshwater and Terrestrial Natural Resources and Ecosystems focus area.

Six major topical areas were covered – the number in parenthesis represents the number of programs conducted within each topic. a) environmental stewardship (40), b) environmentally and economically friendly practices (39), understanding terrestrial and freshwater systems (38), Understanding and improving human interactions (31), promoting and supporting volunteer activities (17), and watershed education (17).

Outcomes reported were based on audience surveys and pre/post tests. Over 97% of participants increased their awareness and understanding of the topical areas based on pre/post tests. Over 86% of participants indicated they had increased their awareness and understanding of the topical area, based on post-workshop surveys.

Faculty expended over 1,925 days. Major areas of activity included group teaching events (453), fairs/exhibits (293), consultations (220), working with media (146), developing educational materials (125), demonstrations/field trails (117), facilitating groups (76), clinics (8), county events (63), and program development (50). Volunteers working on associated projects provided over 380 days.

Group attendance for focus areas totaled 16,829 with 60% male and 40% female. Ethnicity included 49% White, 4% Black, 3% Hispanic, 0.3% Asian and 44% unknown.

The target audience and number of major programs conducted for each audience were land owners, users and developers (28), natural resource managers (22), recreational hunters (17), extension faculty (15), youth (13), educators (12), non-consumptive recreation sector (9), recreational fishing sector (8), policy makers and community leaders (7) and the boating sector (6).

In summary, this report shows that Extension Faculty are conducting a variety of programs at regional, state and county levels that address freshwater and terrestrial natural resources and ecosystems. issues. The audience surveys indicate that individuals are making changes as a result of participating in these programs.

Report for Goal 2.3
Environmental Education

Thirty-five Extension faculty representing seven academic departments, four Research and Education Centers (REC) and twenty-five counties reported programming in the environmental education focus area.

Seven major topical areas were covered – the number in parenthesis represents the number of programs conducted within each topic. a) Master Wildlife Conservation Program (26), engaging the audience (26), supporting community leaders (25), home building, remodeling, construction (24), safety (17), resource management (9), and supporting educational reform in Florida (8).

Outcomes reported were based on audience surveys and pre/post tests. 100% of participants indicated they were making changes in using critical thinking skills in environmental problem solving, use technology-based programs to promote environmental education, and use environmental education programs to meet State Science Standards and help prepare youth for the FCAT. Over 96% of participants indicated they were motivated to become engaged in community environmental issues, and 90% indicated they would enhance their communities through environmental science projects. Also, 90% of extension volunteer participants indicated they would support environmental education programs. Finally, over 85% of participants indicated they better appreciated the complexity and intricacies of Florida's environment, and would utilize research-based information on environmental issues.

Faculty contributed over 930 days, staff contributed over 1010 days, and volunteers contributed 318 days to focus team activities. Total days expended were 2258 days. Major areas of activity for faculty included group teaching events (246.5), consultations (126), developing educational materials (124), clinics (67), classroom enrichment (66), demonstrations and field trials (63), program development (47), and state and national events (37).

Group attendance for focus areas totaled 18,581 with 51% male and 49% female. Ethnicity included 42% White, 6% Black, 4% Hispanic, 0.3% Asian and 48% unknown.

The target audience and number of major programs conducted for each audience were Florida residents (31), providers of youth and adult based environmental education programs (25), builders and developers (14), extension faculty (14), and advisory committees (6).

In summary, this report shows that Extension Faculty are conducting a variety of programs at regional, state and county levels that address environmental education issues. The audience surveys indicate that individuals are making changes as a result of participating in these programs.

Goal 2.4

Conservation and Sustainable Use of Coastal and Marine Natural Resources and Ecosystems

Twenty-nine Extension faculty representing three academic departments and units, two Research and Education Centers (REC) and twenty-one counties reported programming in the Conservation and Sustainable Use of Coastal and Marine Natural Resources and Ecosystems focus area.

Six major topical areas were covered – the number in parenthesis represents the number of programs conducted within each topic. a) promoting environmentally and economically friendly practices (58), understanding estuarine, coastal and marine systems (50), understanding and improving human interactions (47), environmental stewardship (45), promoting and supporting volunteer activities (38), and watershed education (30).

Outcomes reported were based on audience surveys and pre/post tests. Over 93% of participants indicated an increased public awareness of environmental stewardship practices. More than 87% of participants increased their awareness, understanding and knowledge of marine and coastal issues, based on pre/post tests. More than 81% of participants indicated an increase in awareness and understanding of marine and coastal issues, based on post-workshop surveys.

Faculty contributed over 2076 days, staff contributed over 340 days, and volunteers contributed 812 days to focus team activities. Total days expended were 3,228 days. Major areas of activity for faculty included group teaching events (511), developing partnerships and collaborations (173), classroom enrichment (172), demonstrations and field trials (165.5), developing educational materials (121), program development (120), facilitating groups (120), fairs and exhibits (85), field days (85), working with the media (69.7), clinics (53), and advisory councils (50.5).

Group attendance for focus areas totaled 23,365 with 60% male and 40% female. Ethnicity included 78% White, 10% Black, 7% Hispanic, 3% Asian and 2% unknown.

The target audience and number of major programs conducted for each audience were natural resource managers (35), policy makers and community leaders (28), land owners, users and developers (31), boating sector (31), educators (29), governmental agencies (29), recreational fishing sector (28), youth (25), extension faculty (21), advisory committees (20), commercial fishing sector (19), and other marine related sector (19).

In summary, this report shows that Extension Faculty are conducting a variety of programs at regional, state and county levels that address coastal and marine natural resources and ecosystems issues. The audience surveys indicate that individuals are making changes as a result of participating in these programs.

Knowledge Areas: 111, 112, 121, 122, 123, 125, 133, 135, 136, 605

Goal 2 Knowledge Area: 102; 103; 104; 111; 112; 131; 132; 133; 134; 135; 136; 137; 141; 216; 403; 605; 608; 610; 723; 803; 804; 901; 902; 903

OUTCOMES		
Conservation and Sustainable Use of Coastal and Marine Natural Resources and Ecosystems		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Increased public awareness of environmental stewardship practices by agricultural and natural resource entities	65	92.31%
Number of contact hours per participant in educational or training sessions	7	100.00%
Number of data points collected by volunteers	988	100.00%
Number of e-mail contacts from clientele	10	100.00%

Number of web page hits	4,500	100.00%
Percentage increase in awareness or understanding - pre & post tests	75	100.00%
Percentage of participants indicating an increase in awareness or understanding - survey	25	100.00%

Conservation and Sustainable Use of Freshwater and Terrestrial Natural Resources and Ecosystems

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Customer satisfaction with Extension Services	94	90.43%
Percentage of participants indicating an increase in awareness or understanding - survey	102	92.16%

Environmental Education

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Advanced certification and/or license	87	96.55%
Extension volunteers will support environmental education programs	20	90.00%
Participants will be able and motivated to engage in community environmental issues	15	93.33%
Participants will understand multiple perspectives on environmental issues	177	45.20%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; AR; AZ; CA; CT; DC; FL; GA; HI; IL; IN; KY; LA; MO; MS; NC; NM; OK; SC; TN; TX; VA; WA

Goal 3--To develop responsible and productive youth through 4-H and other youth programs

Summary for Extension Goal 3

Life skills Focus Report - 2005

The development of marketable and productive skills for work and family life has been cited by researchers as a major outcome for positive youth development. Learning to be productive, do well in school, develop positive outside interests and acquire basic life skills for work and family life is a basic transition from youth to adulthood. Studies

indicate that the more internal assets and life skills youth build the more likely they are to grow up healthy, confident and responsible and less likely to become involved in risky behaviors

Program Activities and Outputs:

- 165 UF Extension faculty, from 70 different units across the state, conducted 4-H programs addressed life skills among youth.
- There were 64 counties reporting programs in this focus area.
- Over 18,000 days of direct group teaching to youth by faculty, teachers, staff and volunteers was reported.
- An additional 6500+ days were expended conducting county and district events, clinics or fairs to support youth life skill development.
- 1276 reported program represented 10 key subject areas for youth development. These were:
    - Individual, Family Resources and Healthy lifestyle choices (280)
    - Environmental ecology and natural resources (148)
    - Leadership (133)
    - Animal Sciences (118)
    - Citizenship (106)
    - Plant Sciences (101)
    - Agricultural Literacy (86)
    - Science and Technology (85)
    - Leisure Arts and Recreation (82)

Program Outcomes and Impacts:
Life skill outcomes from county based programs across the state were reported in 16 skill areas. The most frequently reported skill acquisition area evaluated for youth was communication skills with 31,943 youth surveyed and 80 % reporting a change as result of Extension programs. Second, was agricultural literacy and environmental knowledge and skills with 16,737 youth surveyed with a reported change at 83%. Both these programs represent two large 4-H youth education programs in the classrooms in the state.

A 2005 statewide survey of youth in 4-H clubs, evaluated the life skill acquisition of youth as well as volunteers assessment of youth skills. In the 2005 survey, 628 4-H'ers responded to the impact on life skills achieved from their 4-H experiences. Likewise, 535 volunteers evaluated what they thought the skill level youth attained from 4-H. Four skills were assessed: communication, relating with others, decision-making and leading and serving others. Overall, the majority of youth (75% or more) rated themselves to attaining these skills most to all the time as a result of their 4-H experiences. The specific findings are presented below.

Skills in communication were measured by four questions. Results of youth were: (a) 58% learn skills useful in dealing with conflicts, (b) 76% learn better communication skills, (c) 73%learn public speaking skills, and (d) 77% gain self-confidence, especially

when if groups. On average within the state, youth reported they learned communication skills most of the time in 4-H.

The capacity of youth to exhibit social skills necessary for developing or maintaining positive relationships with others was measured with five questions. The percent of youth that responded with high to moderate ratings of these five relationship skills as a result of 4-H were: (a) 80% develop close relationships with others in 4-H, (b) 76% learn relationship skill building processes, (c) 79% earn to trust others and be trustworthy, (d) 82% value and care about others' feelings, and (e) 83% make and keep friends.

Eight items represented these core competencies resulting in decision-making skills of youth. (Table 2). The majority of youth responded that they could perform these skills *most* to *all the time* with means ranging from 4 to a high of 5 on the 5-point scale. Overall, 70% have learned to organize their time and resources; 78% reported learning decision-making; 76% are saying "no" to risky behaviors and 84% feel they are responsible for their own actions

The development of leadership and citizenship life skills are very important aspects of 4-H that helps young people gain independence and a sense of worth. The percent of 4-H'ers rating moderate to high level of skills were: (a) 78% feeling useful and important, (b) 74% learning to become a leader among their peers, (c) 77% learning to value service to their community and (d) 71% being engaged in their own club program planning. By comparison, adult volunteers rated youth outcomes for leading and serving others slightly higher across all indicators.

Focus Team – Volunteer Development and Systems to Support Youth

Studies confirm the value of a significant other adult in the life of a child. The ability of 4-H Programs to provide safe and secure environments is dependent upon the management and quality of trained staff of volunteers. Likewise, other youth outcomes like a sense of belonging and inclusive and supportive environments are related to the effectiveness of volunteers/ relationships and interactions with youth.

Florida 4-H annually engages 12,469 volunteers in providing supporting learning environments for youth enrolled in programs in all 67 Florida counties. Over 10,880 are adults and 1,262 are youth volunteers. Counties throughout Florida offered opportunities for 1786 volunteers to plan learning events, serve on advisory committees or Foundation boards, or to provide indirect support to youth. One hundred seventy eight volunteers served in middle management roles. A high majority of these were oriented and trained for their specific responsibilities. Primary topics in volunteer development included: club management (63), evaluating youth learning (35), how to guide learning (70), key projects (54), program safety and liability (67), understanding

diversity (61), volunteer management systems (62), and youth/adult partnerships (73). The goal for the Volunteer Development focus area is to create caring adult support systems for youth.

Outcomes reported were based on audience surveys.

- 100% of reported volunteers (208) gained skills in leadership and teamwork.
- 100% of reported volunteers (129) increased use of core youth development curriculum.
- 100% (219) of volunteers surveyed, increased knowledge and skill in a specific skill area.
- 96% of all volunteers (347) increased knowledge of risk management through 67 programs in safety and liability.
- 76% of the volunteers (1100) surveyed understand how to create caring environments.
- 86% of the volunteers (635) adopted best practices for youth/adult partnerships.

About 60% of program development was conducted by Florida volunteers. Four times as many days were expended for funding efforts by volunteers compared to faculty/staff. Faculty/staff expended over 1000 days teaching other volunteers while volunteers spent over 200 days teaching other volunteers. Faculty/staff expend the majority of their time teaching volunteers in groups, personal consultations and program development. 15,151 days were expended by volunteers to teach life skills, so more than 50% of total reported days expended in life skill development, were done by volunteers. Volunteers expended 6,304 days to organize and manage events and programs across Goal 3.

2005 Statewide Survey

Results of a 2005 survey of youth and adult volunteers supporting 4-H clubs revealed an assessment of the effectives of volunteers in two areas: 1) Caring and supportive environments through personal support and mentoring by meeting individual youth's needs and 2) providing a safe and secure environment for youth.

Volunteers Create Caring & Supportive Environments For Youth

Overall, youth rated 4-H clubs volunteers as very effective at individual mentoring and support . Eighty-three percent of the youth and ninety-one percent of the adults reported that volunteers listen to them *most to all the time.*; 81% of the youth (87% of the adults) responded that volunteers talk and spend time with them when they have problems; 83% (of the youth and 94% of the adults) feel that the volunteers make them feel special and important as well as set high expectations and 84% (of the youth and 93% of the adults) report that their volunteers encourage them to take leadership roles and recognize them for accomplishments.

Volunteer Provide Safe and Secure Environments

Volunteer Screening is an established best practice for safe 4-H youth programs. Establishing consistent screening and risk management policies to provide a sense of safety and security among youth has been a key activity in 2005. Training was provided for youth faculty and volunteers to develop positive relationships and effectively manage youth behaviors within group settings.

Results of the 2005 evaluation survey of 628 4-H club youth and 535 adult club volunteers measuring the impact of volunteer effectiveness of youth safety and security revealed these findings. Overall, youth rated 4-H Club volunteers as very effective at managing youth relationships and behavior within groups. Overall, 85% of the youth reported volunteers kept youth from bullying each other; 84% most or always managed conflicts among youth; and 90%

made sure 4-H events and activities were safe. The two lowest rated areas were keeping youth from hurting each others' feelings (72%) and understanding/relating with youth from different backgrounds or culture (75%).

The aggregated total number of days expended in this focus area was 3,599.5. Volunteers were the target audience for 49 different programs, while extension faculty were the target audience for 17 programs.

Goal 3: Focus Team: Organizational Strategies and Learning Environments to Support Youth

Florida 4-H annually educates over 240,000 youth enrolled in programs in all 67 Florida counties, reaching youth 5 to 18 years of age through clubs, special interest groups, residential camping, classrooms, and independent study. Thirty-five percent of all youth enrollment are racial and ethnic minorities. Focus area topics include program delivery strategies, resource management, and marketing. The goal of organizational strategies and learning environments is to support youth programs through developing a structure that effectively manages staff and volunteers.

The objective of organizational strategies is to ensure learning environments that allow youth to: develop a sense of belonging; be physically and emotionally safe; develop and maintain positive relationships; develop personal competencies; grow and contribute as active citizens; and develop marketable productive skills. In 2005, data collected from a sample of 4-H youth statewide indicated:

- 84% of youth feel that 4-H provides a safe place for learning and growing
- 72% of youth feel that 4-H involved youth from different cultures and ethnic backgrounds
- 81% of youth feel that 4-H has made a positive difference in their life

Florida 4-H faculty, staff, and volunteers have expended over 14,000 days developing program delivery strategies, marketing, and resource management to organize 4-H programs. This includes 296 extension programs targeted towards advisory committee members, extension faculty and support staff, partnerships with other organizations, volunteers, and youth.

Knowledge Areas: 801, 205, 307

Knowledge Area: 123; 135; 136; 206; 301; 302; 307; 315; 403; 501; 604; 608; 703; 724; 801; 802; 803; 805; 806; 901; 902; 903

OUTCOMES		
Life Skills Developed in Youth Through Subject Matter Experiences		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***

Develop Communication Skills.	372	50.54%
Develop Competencies of Goal-Setting, Planning and Organizing	66	100.00%
Develop Decision-Making, Problem-Solving and Critical Thinking Skills	400	59.50%
Develop Healthy Lifestyle Choices	620	100.00%
Develop increased Self-Esteem / Self-Confidence	145	80.00%
Develop Increased Self-Responsibility	240	35.83%
Develop Leadership Skills	154	0.00%
Develop Positive Relationship Skills With Others	154	0.00%
Improve Agriculture and Environmental Knowledge/Skills	1,841	56.93%
Improve Animal Sciences Skills	320	83.13%
Improve Family and Consumer Skills	502	100.00%
Improve Science and Technology Skills	25	80.00%
Improved Competencies to Deliver Youth Programs	33	100.00%
Organizational Strategies and Learning Environments to Support Youth Programs		
Outcome	**Total Audience Surveyed**	**Percent of Target Audience Making Change**
4-H Camping Programs Demonstrate Quality and Excellence	124	70.16%
4-H Community Clubs Demonstrate Quality and Excellence	691	73.08%
4-H Program Demonstrates a Safe and Inclusive Environment	56	10.71%
4-H Program Demonstrates Effective Communication, Collaboration and Marketing	132	41.67%
Efforts		
Educators satisfied with 4-H school enrichment program	58	0.00%
Educators utilizing 4-H curriculum	86	100.00%
Number of Chartered 4-H Clubs	1	0.00%
Number of Youth in Community Clubs	49	0.00%
Participate in a variety of out-of-club experiences	24	100.00%
Staff are adequately trained to manage and deliver youth development programs	88	85.23%
Volunteer Development and Systems to Support Youth		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Volunteers Develop Skills in Leadership and Teamwork	32	21.88%
Volunteers Recruited	50	40.00%
Volunteers Understand how to Create a Caring Environment for Youth	204	9.80%

Volunteers will adopt best management practices related to diversity.	27	18.52%
Volunteers will increase their knowledge and skill in specific areas of subject matter.	23	100.00%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; AR; CA; CO; CT; DE; FL; GA; ID; IN; KS; KY; LA; MD; MN; MO; MS; NC; OH; OK; PA; SC; SD; TN; TX; VA; WA; WV; WY

Goal 4--To create and maintain Florida friendly landscapes: The smart way to grow

Summary for Extension Goal 4

Goal 4 Commercial Horticultural/Urban Forestry Services

Thirty three faculty from 34 departments, research and education centers and county offices designed and delivered educational programs for commercial horticultural and urban forestry personnel. Topics of educational programs included business management, diagnostics and services, integrated landscape best management programs, pesticide safety education, plant sciences, public policy and soils and fertilizers. A total of 259 programs were offered.

Outcomes were reported as a result of participant surveys. Sixty four different outcomes were reported depending upon the specific topics addressed in the educational Programs. A minimum of 64% of the audience reported increased knowledge, skills, or behavior change depending on the specific outcome. Most of the changes in client outcomes were between 80 and 100%. Some of the specific outcomes reported were ability to calibrate, make repairs, and evaluate irrigation systems for use and site conditions, ability to determine appropriate product/service prices, ability to perform basic pest identification, able to understand the cause and prevention of common nutritional deficiencies, utilize appropriate pruning techniques, describe characteristics, advantages and disadvantages of common Florida turfgrasses, ability to identify weeds, diseases, or insects, ability to scout landscapes for pests, and ability to utilize efficient and effective use integrated pest management systems and fertilizer programs. A total of 98,973 individuals participated in these educational programs. Programs were delivered in a variety of ways, consultations, demonstrations, field days and group teaching events. A total of 2,105 days were expended by faculty, staff and volunteers in the design, development and delivery of educational programs.

In summary, 98,973 individuals attended 259 educational programs delivered by 34 county and state faculty. Programs were extremely effective as indicated by evaluation results. Of extreme importance is the increased use of environmentally sound techniques by landscape professional in the management of landscapes.

Goal 4 Florida Yards and Neighborhoods (FYN)

Twenty three faculty delivered educational programs for the statewide program, Florida Yards and Neighborhoods. This program is predominantly delivered to residents and commercial horticultural services to provide knowledge and encourage the use of environmentally friendly landscape maintenance practices. It should be noted that this program is incorporated into the residential landscape focus area educational programs. However, this program is solely delivered to clientele to achieve adoption of the nine principles of environmentally friendly landscaping procedures. Funding for this program is dependent upon outside sources (federal, state, and county agencies). A total of 112 educational programs were conducted for more than 158,000 individuals.

Topics included in the educational programs included various aspects of landscape design, installation, and management, and public policy. In addition, faculty developed additional program support, developed FYN demonstration sites in the community, and improved the general public's knowledge of the need for environmentally friendly landscape management of their homes, businesses and communities. It should be noted that a public awareness campaign was conducted in collaboration with the Southwest Water Management District that included radio spots, billboards, and development of educational exhibits and materials.

A total of 4,105 days were expended by faculty, staff, and volunteers in the delivery of these programs. Delivery of educational programs and materials were made through group learning events, fairs, local and regional events, demonstrations, clinics, and consultations. Outcomes reported were based on participant surveys. The outcome efficient use of inputs for landscape management showed that 45% of the audience participating in the survey would make appropriate changes.

In summary, this report indicates that Extension faculty are working actively with residents to inform them of the environmental consequences of their landscape management practices and informing them of the nine principles for environmentally sound management of their landscapes. It should be noted that these principles are delivered to clientele in the residential landscape focus area, however, that program area has broader objectives than the specific objectives of this program.

Goal 4 Residential Landscapes

Sixty five faculty from 55 departments, research and education centers or county offices conducted education programs in the focus area of residential landscapes. Specific topics addressed in the educational programs were, diagnostics, home fruit and vegetable gardening, landscape design, installation, and management, and landscape management practices. In addition, volunteer leadership development and management programs were offered to volunteers. A total of 625 educational programs were conducted in these topic areas.

Outcomes reported were based on audience surveys. Of particular importance are the outcomes increased awareness of plant pest problems, available diagnostic services, biosecurity risks, and control choices, where participants (12,081) reported increased awareness (92%) and improved diagnostic/identification skills, where participants (10,874) reported a 99% increase in skills. Other outcomes surveyed with at least a 74% increase were decreased landscape costs, pesticide usage, landscape call backs, disease problems, improper pesticide usage, efficient use of inputs for landscape management, and maintain landscapes in an environmentally friendly manner. Outcomes were also reported with regard to the development of demonstration gardens, speakers bureaus, improved community relations, improved visibility for UF/IFAS, increased numbers of

master gardener volunteers, and positive client experiences as a result of diagnostic clinics and volunteer master gardener programs. A total of 361,448 individuals participated in these educational programs. Programs were delivered in a variety of ways, consultations, demonstrations, field days and group teaching events. It is important to note that in the diagnostic clinics and personal consultations with clientele, faculty, staff and volunteers expended a total of 10,265 days 6,219 of which provided by volunteers in the Master Gardener program.

In summary, a total of 361,448 individuals participated in educational programs provided by faculty, staff and volunteers. The primary target audiences were Florida residents and solicitors of professional landscape services. In addition, 14 various in-service programs were conducted for county faculty. With an ever-increasing population in Florida, it is imperative that UF/IFAS faculty provide high quality educational programs to residents so that landscapes are managed in an environmentally manner to reduce non-point source pollution. It is only expected that the number of educational programs and clientele availing themselves of these programs will continue to increase.

Knowledge Areas: 102, 111, 112, 124, 133, 134, 205, 215, 216, 602

Goal **Knowledge Area:** 101; 102; 112; 133; 201; 204; 205; 206; 211; 212; 213; 216; 405; 602; 603; 604; 608; 610; 723; 802; 803; 805; 806; 903

OUTCOMES		
Commercial Horticultural/Urban Forestry Services		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Able to evaluate irrigation system for use and site conditions	17	64.71%
Able to make minor repairs to irrigation system	17	64.71%
Able to match plants to site conditions.	17	100.00%
Describe environmental conditions, causes and symptoms of major landscape diseases	30	100.00%
Describe the procedure to take samples for disease identification.	30	100.00%
Have an awareness of environmental and site conditions at time of fertilizer applications	30	20.00%
Have an understanding of the various components of the term "site conditions."	30	100.00%
Have awareness of appropriate customer service skills.	240	70.00%
Increased usage of diagnostic services	30	66.67%
Outcomes for Florida Yards and Neighborhoods (FYN)		
Outcome	***Total***	***Percent of Target***

	Audience Surveyed	*Audience Making Change*
Additional program support (funding, in-kind resources, etc.)	1,465	100.00%
Development of FYN demonstrations	76	92.11%
Efficient use of inputs for landscape management	2,769	32.00%

Outcomes for Residential Landscapes

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Decreased landscape costs, pesticide usage, landscape call backs, disease problems, improper pesticide usage.	15	100.00%
Develop or Refine Speakers Bureau	11	100.00%
Efficient use of inputs for landscape management	15	100.00%
Identify Pests and Process Samples	28	57.14%
Increase the Number of Master Gardener Volunteers	21	80.95%
Maintains Landscape in an Environmentally Friendly Manor	317	88.33%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; DC; FL; GA; MS; SC; TN

Goal 5--To assist individuals and families to achieve economic well-being and life quality

Summary for Extension Goal 5

Report for Goal 5.1
Personal and Family Well-Being

Forty extension faculty in thirty-one counties representing all extension districts and one REC reported programming in the Personal and Family Well-Being Focus Area. Two major topic areas were covered – the number in parenthesis represents the number of programs conducted under each topic. (a.) Family and Human Development (57), (b) Professional and Career Development (35)

Outcomes reported were based on audience surveys. Three outcomes, (1) individuals learn knowledge/skills necessary for strong, healthy family relationships, (2) increased knowledge of various caregiving options, and (3) increased knowledge in subject matter and confidence in teaching, showed that more than 90 percent of the audience made changes. For nine outcomes,

more than 80 percent of the audience reported making changes. Two outcomes, (1) effective communication skills and (2) increased knowledge and skills of social and emotional development, showed more than 70 percent of the target audience making changes.

Volunteer activity contributed greatly to this focus area, a total of 887 days. Four major areas of activity were; group teaching events (772 days), facilitating groups (42 days), Advisory Council (31 days), and developing partnerships and collaborations (15days).

The total group attendance for all programs in Goal 5.1 focus area was 118,946, with 73% being white and 62% female. The target audiences and number of programs conducted with each audience were extension faculty (10), individuals/families (33), professionals/paraprofessionals (26), and youth (4).

In summary, this report shows that county extension faculty, state-wide, are working extensively with county residents and agencies in the area of personal and family well-being. Surveys indicate that, as a result of these programs, individuals are making changes.

Report for Goal 5.2
Financial Management and Economic Well-Being

In 2005 more than 151,776 people in 37 counties participated in programs that teach youth and adults to better manage their resources through developing spending and savings plans, managing credit, decreasing debt, planning for retirement, developing consumer competencies in the market place, managing risk, and avoiding frauds and scams. 238 priority programs in seven areas of Financial Management and Economic Well-Being were conducted this past year:

a. Consumer Competence - 41 programs were conducted in consumer competence. 894 participants were surveyed regarding behavior change. 86.5% of respondents indicated that they had improved comparison-shopping behaviors and saved money.
b. Consumer Safety – 24 programs were conducted, 159 participants were surveyed and 81% of respondents reported that they had used reliable information for purchases to avoid consumer fraud and deceptions.
c. Credit/Debt Management – 48 programs were conducted, 3,255 participants were surveyed and 78% of respondents reported that they had managed debt to achieve family goals. 900 participants were surveyed regarding debt management strategies, 83% of respondents indicated that they had developed strategies to decrease debt.
d. Financial Literacy – 56 programs were conducted, 127 participants were surveyed and 86% reported that they had developed strategies to reduce taxes. 50 participants were surveyed regarding development and maintaining a family emergency action plan. All participants reported positive action in establishing an emergency action plan. 3,304 participants were surveyed regarding development of a record keeping and financial planning system. 87% of respondents reported that they had implemented such a system. 32,470 students in 283 Florida schools participated in the High School Financial Planning Program cosponsored by the Florida Cooperative Extension Service and the National Endowment for Financial Education.
e. Financial Security in Later Life – 31 programs were conducted. 1,044 participants were surveyed and 85% of respondents reported they had developed strategies to increase wealth through savings and investing. 758 participants were surveyed and 91% of respondents reported that they had increased wealth through savings and investing.
f. Marketplace Performance – 14 programs were conducted. 816 participants were surveyed and 85% used financial institutions to protect their finances and assets.

g. Protecting Your Assets – 24 programs were conducted. 492 participants were surveyed and 86% of respondents reported that they had developed strategies to protect their financial assets. 715 participants were surveyed and 68% reported that they had developed strategies to evaluate and select insurance policies.

Extension Financial management information is also available on Family Album Radio, www.familyalbumradio.com, a new IFAS Extension radio series for Public Broadcasting Stations in Florida and across the nation.

Report on Goal 5.3
Nutrition, Food Safety and Health

Sixty-two county Extension faculty in fifty-two counties representing all Extension districts reported conducting programs in the focus area, Nutrition, Food Safety and Health (NFSH). In addition, three state faculty and four program assistants reported activities in NFSH. Educational programs were conducted in eleven specific topic areas. **The topics and number of programs reported in each area include:**

Cancer Risk Reduction (46)
Elder Nutrition and Health (61)
Food Safety and Handling (78)
Food Safety and Quality – Current Issues (56)
Managing Type 2 Diabetes (39)
Maternal and Child Health (59)
Nutrition for Sports Success (13)
Nutrition and Health – Current Issues (69)
Promoting Cardiovascular Health (48)
Tools for a Healthy Lifestyle (83)
Weight Management (57)

The reported number of programs in several of these topic areas is surprising. The NFSH team co-leader worked with seven counties that conducted the *Take Charge of Your Diabetes* program in 2005, supported with funding from the Florida Department of Health. In addition, approximately five counties taught healthy cooking classes for persons with diabetes. This number of counties is far fewer than the 39 reported for Managing Type 2 Diabetes. Cancer Risk Reduction (46 programs reported) is currently not supported with an educational curriculum and there have been few requests for materials in this area. Finally, the Team co-leader worked with six counties that conducted a new weight management program as part of an NIH-funded research study, but is not aware of other counties using the Extension curriculum, *Toward Permanent Weight Management*, which currently is being updated.

The **primary target audiences identified** were consumers (75 programs), educators (44), food service establishments (24), volunteers (36) and youth (35). The total number of programs reported in the topic areas (previous paragraph) does not appear to have any relationship to the number of programs conducted for these target audiences.

The **major activities (at least 50 days reported)** by state and county faculty, staff and volunteers in support of this focus area included:

Work with advisory councils (60 days)
Classroom enrichment (1,398 days)
Clinics (74 days)
Consultations (145 days)
Curriculum development (53 days)
Demonstrations (66 days)
Developing educational materials (162 days)
Developing partnerships and collaborations (186 days)
Facilitating groups (84 days)

Fairs/exhibits (321.5 days)
Group teaching events (10,653 days)
In-service training (323 days)
Marketing (89 days)
Program development (352.5 days)
Working with media (114 days).

Other activities combined totaled 85.5 days, for a **total of 14,198 days expended** in this focus area.

It is notable that **volunteers spent 1,461 days contributing to group teaching events.** Some of these were Master Food and Nutrition Educator Volunteers, an emerging volunteer training program developed to support NFSH programming being conducted in several counties in the state. The NFSH Focus Team has established an Action Team that is working to standardize this volunteer program for statewide implementation.

Outcomes reported were based on audience surveys. Thirteen outcomes reflected increased knowledge, two were attitude changes, nineteen were behavioral outcomes, two were impacts (pass certification exam and reduce food costs), and one was a specifically targeted health outcome of the *Take Charge of Your Diabetes* program (demonstrate improved blood glucose control). The report indicates that this health outcome was achieved by 76% of 194 persons surveyed, although we had 44 persons complete the program. We did find a significant improvement in blood glucose control among those participating. Improving blood glucose control is significant because it decreases risk of health complications such as kidney and heart disease, amputations, and blindness in persons with diabetes.

Key behavioral outcomes achieved by a majority of those surveyed include:

Change high-risk lifestyle behaviors to reduce cardiovascular risk (80%of 3,295).
Use cost effective strategies in planning and preparing meals and snacks (84% of 7,494).
Use food labels to make healthy choices (85% of 18, 529).
Use recommendations of the Dietary Guidelines for Americans to guide food and activity choices (85% of 10,121).
Use recommended clearing and sanitizing techniques (77% of 4,145).

The **total group attendance for all programs reported in NFSH was 966,156**, which seems to be an unrealistic number. It may be that these are contacts, which take into account the number of people and the number of lessons/workshops they attend, rather than the number of individual persons who attended programs. The ethnic make-up of the reported audiences included White (168,878), Black (100,029), and Hispanic 53,534, although most were of unknown ethnicity (640,621). There were about twice as many females (215,538) as males (111,596), but most were listed as unknown (639,022).

This report indicates that **county Extension faculty are conducting a variety of educational programs that address significant issues in nutrition, food safety and health**. They are supported in their efforts by state faculty who provide in-service training, educational curricula and materials, and external funding for Extension programming. Although some of the numbers reported are questionable and should be further studied, there clearly are many programs being conducted that touch on critical nutrition, food safety, and health issues. The potential impacts on nutritional status, health, and quality of life of program participants and their families, along with reduced health care costs for individuals, businesses, and the state are enormous.

Report on Goal 5.4
Housing and Environment

Thirty-five extension faculty in 30 counties, representing all extension districts, reported conducting programs in the focus area of Housing and Environment. Nine specific topics were covered. The number of programs conducted on each topic is in parenthesis: Fraud/Financial Risks (17); Home Building/Remodeling - Construction (37); Home Building/Remodeling – Regulatory Issues (28); Home Environment (40); Home Furnishings/Interior Design (26); Home Ownership Affordability (28); Home Purchasing/Housing Options (20); Maintenance/Upkeep/Renovation (27); and
Safety (30).

Outcomes reported are based on audience surveys, participant reports, and record documentation. A total of 910 Floridians (77% of participants) reported they learned how to, and did resolve credit problems so they could purchase homes. Also, 85% of 859 participants reported they learned how to work with loan officers and other financial professionals and 100% of 123 learned how to qualify for a loan. Families with credit issues reported they learned to budget and manage their housing/household finances, 1170 (88% of participants) reported making and following a spending plan. Choosing the wisest housing options for one's situation and finances is often difficult. A total of 483 (65% of participants) reported they learned to evaluate housing options. 65% of 720 tenants reported that learning to read and understand their leases was helpful.

The indoor air quality of a home is beneficial to the health and finances of a family; 80% of 406 participants reported making changes to improve air quality. 100% of 1,560 reported learning how to conserve and protect the quality of water in their homes and 91% of 2,146 participants reported learning how to select and care for furnishings and to create clean, comfortable, attractive living areas. Special programs teaching Floridians to inspect their homes and make simple modifications were helpful to participants. 79% of 955 participants reported making changes to make their homes safer.

Special programs updating construction skills and licensing requirements were beneficial to consumers as well as contractors and remodelers. 96% of 230 contractors and remodelers updated their construction skills and 97% of 902 participants improved their knowledge regarding energy conservation. All (100%) of 207 homebuilders and remodelers became better informed regarding Workman Compensation requirements and the Occupation Safety/Health Act. Almost all (99.41%) of 507 participants became better informed about building codes and other regulations.

A total of 890 days was spent with this focus area; of those 585.5 were faculty member days. The total attendance for programs was 17,128. Of these 86 were Asian, 1,543 Hispanic, 3,223 Black, 9,885 White and 2,375 unknown. There were more women than men, 9,059 women compared to 6,012 men (2057 unknown). There was a total of 21 programs.

In summary the report indicates that County extension faculty are working actively with the housing and environmental programs. It is envisioned that when the housing specialist position is filled and can provide full time leadership, programming will increase rapidly.

Report on Goal 5.5
Nonprofit Organizations, Leadership and Volunteer Development

Twenty seven extension faculty in twenty four counties representing all extension districts reported conducting programs in the focus are of Nonprofit Organizations, Leadership and Volunteer Development. Nine specific topic areas were covered. The number in parentheses indicates the number of programs conducted in each area. (a) Financial documents for the nonprofit (8); (b) Fund raising for the nonprofit (10) ; (c) Marketing for the nonprofit (12); (d) Governance (9); (e) Public relations for the nonprofit (11); (f) Strategic planning for the nonprofit (9); (g) Controlling documents (3); (h) Leadership education for nonprofits (24); (i) Volunteer development (32).

Outcomes reported were based on audience surveys. Two outcomes, (a) establishing and maintaining policies and procedures and (b) understanding the community and the role of the nonprofit organization, showed that 100 percent of the total audience made changes. Audience surveys showed three outcomes had 90 percent or higher in (a) developing leadership skills, (b) improving Extension effectiveness from collaboration with nonprofits, and (c) establishing and maintaining roles and responsibilities. Two outcomes showed 76 percent of target audience making changes: (a) Developing communication skills and (b) developing competencies in goal setting, planning and organizing.

Volunteer activity was particularly helpful in this focus area. Volunteers spend 823 days in developing educational materials, 555 days in facilitating groups, 500 days in working with fairs and exhibits, and over 1,700 days in group teaching events

The total group attendance for all programs in goal 5.5 was 83, 000 with the great majority being white females. The target audiences were primarily local or regional nonprofits with 20 programs conducted and 5 programs conducted for professional associations.

In summary, this report indicates that county extension faculty are working actively with nonprofit organizations by the topics addressed and the number of programs conducted. It is expected that as in-service education is provided to county faculty that the audiences will increase in each specific outcome identified. Already the audience surveys indicate that changes are taking place as a result of the training and education provided.

Knowledge Areas: 503, 504, 607, 701, 702, 703, 724, 801, 802, 804

Knowledge Area: 112; 136; 602; 603; 604; 608; 701; 703; 712; 723; 724; 801; 802; 803; 804; 805; 806; 901; 902; 903

OUTCOMES		
Financial Management and Economic Well-Being		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Develop strategies for increasing wealth by using savings and investments.	258	96.51%
Manage credit and debt to achieve family goals	299	93.65%
Record keeping and financial planning systems	273	95.24%
Strategies for increasing wealth through savings and investments	258	76.36%

Using financial institutions to protect their finances and/or assets	286	84.62%

Housing and Environment

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Contractors increase knowledge of home construction skills.	31	83.87%
Participants increase knowledge about environmentally sound homesites, landscape designs, and water management.	73	91.78%
Program participants will increase knowledge about energy efficient construction methods, materials, and equipment.	104	99.04%
Program participants will increase knowledge of building codes and other related regulations.	73	95.89%
Program participants will inspect their homes and make changes needed to protect them.	16	81.25%
Program participants will learn to conserve and protect the quality of water.	1,538	99.80%

Nonprofit Organizations, Leadership and Volunteer Development

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Adequate financial resources exist to meet goals and objectives	37	35.14%
Develop Competencies of Goal-Setting, Planning and Organizing	5	60.00%

Nutrition, Food Safety, and Health

Outcome	*Total Audience Surveyed*	*Percent of Target Audience Making Change*
Apply food safety principles to infant feeding practices	121	100.00%
Demonstrate improved blood glucose control	7	100.00%
Develop increased Self-Esteem / Self-Confidence	3	100.00%
Pass certification exam	10	40.00%
Reduce food costs	17	100.00%
Understanding of basic nutrition.	61	98.36%
Understanding of common types of food/drug and drug/nutrient interactions.	45	100.00%
Understanding of current food safety and quality issues.	169	99.41%
Understanding of current nutrition and/or health issues.	279	100.00%
Understanding of food safety issues and recommended safe food	525	99.05%

handling practices.		
Understanding of healthy food preparation techniques.	23	100.00%
Understanding of healthy lifestyle practices.	6	100.00%
Understanding of nutrient needs throughout the lifecycle.	90	100.00%
Understanding of risk factors for foodborne illnesses.	383	100.00%
Use dietary supplements only as needed for adequate nutrient intake	22	100.00%
Use food labels to make healthy choices.	17	58.82%
Use good personal hygiene practices.	393	100.00%
Use recommended food handling practices	118	100.00%
Use thermometers as recommended to reduce risk of food borne illness.	10	100.00%

Outcomes for Personal and Family Well-Being

Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Develop increased Self-Esteem / Self-Confidence	1,076	81.88%
Effective Communication Skills	1,790	68.99%
Family members learn strategies to prepare for family life changes.	1,102	60.16%
Individuals develop skills needed to manage stress effectively.	1,230	83.74%
Individuals learn knowledge/skills necessary for strong, healthy family relationships.	1,190	77.06%
Participants will increase knowledge and skills of social and emotional development.	455	65.49%
Participants will increase knowledge of various caregiving options.	97	92.78%
Participants will increase their knowledge in subject matter and confidence in teaching.	97	97.94%
Participants will learn a variety of strategies to help children/teens experience success.	341	54.25%
Participants will learn how to develop safe/healthy learning environments for children/youth.	97	100.00%
Participants will learn strategies to balance work and family.	889	86.05%
Participants will learn teaching methods/preparation of learning materials.	97	98.97%
Participants will learn what to expect from children/teens at different ages.	455	79.56%
Participants will use positive techniques for guiding children's/teens' behavior.	508	73.62%
Physical and cognitive changes that accompany aging	26	88.46%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; AZ; CA; CO; DC; FL; GA; HI; IA; ID; IL; KS; KY; LA; MN; MS; NC; NE; NJ; OH; OK; OR; SC; TN; TX; VA; WA; WI; WY

Goal 6--Healthy Communities

Summary of Extension Goal 6

Report on Goal 6.3
Economic Diversity Focus Area

Twenty extension faculty across 14 IFAS units, one research and education center representing all extension districts reported conducting programs in the focus area of Economic Diversity. Six specific topic areas were covered. The number in parentheses indicates the number of programs conducted in each area. (a) Agricultural Awareness and Literacy (19); (b) Community Decision Making (25) ; (c) Economic Development (21); (d) Growth Management (18); (e) Leadership (19); and (f) Public Policy (21).

Outcomes reported were based on audience surveys. Eight outcomes, (a) develop decision-making, problem-solving and critical thinking skills, (b) develop leadership skills, (c) implementation of smart growth principles, (d) number of communities initiating a strategic planning process, (e) number of employees learning principles of working in teams, (f) number of local leaders trained, (g) teamwork and cooperation, and (h) training, coaching, and delegating showed that 100 percent of the total audience made changes. Audience surveys showed one outcome had 99 percent or higher of the respondents making changes in the area of developing communication skills. Audience surveys showed one outcome had 83.33 percent or higher of the respondents making changes in the area of number of employees added. Audience surveys showed one outcome had 76.24 percent or higher of the respondents making changes in the area of appraising people and performance.

There were a total of 2,806 days expended for all activities in the economic diversity focus area. Activity areas include: advisory councils (18 days), classroom enrichment (132 days), consultations (348 days), demonstration/field trials (800 days), developing educational material (22 days), developing partnerships and collaborations (153 days), district events (20 days), facilitating groups (148 days), fairs/exhibits (92 days), group teaching events (644 days), marketing (168 days), needs assessment (42 days), program development (76 days), reporting results (60 days), state/national events (33 days), and working with the media (50 days).There were a total of 1100 faculty days, 864 staff days, and 842 volunteer days devoted to economic diversity. The total group attendance for all programs in goal 6.2 was 14,700 with a majority (48%) being white females. Programs for the target audiences were split relatively evenly between: businesses (11), extension faculty (9), government agencies (14), non-government organizations (17), organizations (14, and quasi-government organizations (12).

Florida Enterprise Zone Activities

There were 3,202 new businesses in the zones and 11,381 new jobs created during the reporting period. State incentives totaled $14,060,057 while local incentives totaled $16,251,479. Combining state and local incentives, businesses located within the fifty-three enterprise zones received more than $30-million of incentives during the reporting period.

The total amount of state incentives in 2004/2005: $14,060,057 represents an increase of approximately $7- million more than the amount approved in 2003/2004. During the 2004/2005 reporting period there were 39 fewer new businesses and 3,679 more new jobs were created compared to the previous year

In summary, this report indicates that state specialists and county extension faculty are working actively with businesses, government agencies, non-government agencies, quasi-government organizations, and organizations by the topics addressed and the number of programs conducted. It is expected that as in-service education is provided to county faculty that the audiences will increase in each specific outcome identified. Already the audience surveys indicate that changes are taking place as a result of the training and education provided.

Report on Goal 6.4
Community Preparedness

Faculty reported reaching almost 50,000 Floridians in 2005 with programs and materials related to community preparedness. After the devastating hurricane seasons of 2004 and 2005, public awareness is very high, and Florida Extension's agents and Disaster Information Program have produced programs and informational and training materials to address a wide variety of needs. In the aftermath of Hurricanes Charley, Ivan, Frances, and Jeanne, Florida Extension distributed many thousands of facts sheets to affected areas to assist people in maintaining quality of life and in recovering.

Nineteen extension faculty in eleven units reported conducting 72 programs in the focus area of Community Preparedness. Faculty reported programs in six of the fifteen specific topics defined for this focus area. The number in parentheses indicates the number of programs conducted in each area: (a) Agricultural Awareness and Literacy (4); (b) Preparedness (19); (c) Recovery (17); (d) Security (2); (e) Special Disaster Topics (17); and (f) Survival (13).

Faculty reports show that over 48,000 Floridians were reached with programs in the Community Preparedness Focus Area. Of these many participants, relatively few were surveyed. Fifty individuals reported 100% making a behavioral change on the outcome “Agricultural Producers aware of sources of appropriate disaster preparedness.” A group of 33 were surveyed on the outcome “Adults increase knowledge of appropriate behavior given breakdown of municipal services” and reported 64% behavior change. Many Community Preparedness events are outreach events and not structured training.

Total days expended in reported activities in this focus area were 376 directly reaching 48,954 people. Days spent in event activities directed at target audiences were 185. Of these, 29 days were supplied by volunteers. A significant number of days were spent in assistive activities, such as consultations and developing partnerships and collaborations.

Knowledge Areas: 131, 608, 803, 804, 805

Knowledge Area: 214; 315; 608; 610; 723; 724; 802; 803; 806; 902; 903

OUTCOMES		
Community Preparedness		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Agricultural Producers aware of sources of appropriate disaster preparedness information.	50	100.00%
Outcomes for Economic Diversity		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Appraising people and performance	623	76.24%
Develop Communication Skills.	53	98.11%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; CA; CO; CT; DC; GA; IA; IL; KY; LA; MD; MI; MN; MS; NC; NJ; OK; OR; PR; SC; TN; TX; VA; VT; WA; WV

Goal 7--To promote professional development activities designed to enhance organizational efficiency and effectiveness

Summary of Extension Goal 7

Report on Goal 7.1
Program Development, Implementation and Evaluation

Nineteen extension faculty across 36 IFAS units, including seven departments, 27 extension offices and two RECs conducted programs in this focus area. Five specific topic areas were addressed. The number in parentheses indicates the number of programs conducted in each area. (a) Accountability and Evaluation (13); (b) Culturally Diverse and Inclusive Programs (14); (c) Program Development and Management (16); (d) Program Evaluation (16); and (e) Program Implementation (14).

Outcomes reported were based on audience surveys. One outcome was assessed, design programs for appropriate ages and stages of development. Seventy six people were assessed, but there were no reported audiences making this change.

There were a total of 869.5 days expended for all activities in the program development, implementation and evaluation focus area. Activity areas include: advisory councils (5.5 days), consultations (189.5 days), curriculum development (30.5 days), developing educational material (58 days), developing partnerships and collaborations (59 days), facilitating groups (8 days), funding efforts (1 day), group teaching events (4 days), in-service training (200 days), needs assessment (1 day), program development (178 days), reporting results (50 days), and state/national events (85 days).

The total group attendance for all programs in goal 7.1 was 119 with a majority (49) being females, 39 males and 31 unknown. Of these 119 people; 69 reported white and 2 reported Hispanic. Programs for the target audiences were split between: county extension faculty (7), extension faculty (11), extension support staff (4), IFAS administrators/supervisors (7), and state extension faculty (2).

In summary, this report indicates that state specialists and county extension faculty are working actively with a number of internal audiences by the topics addressed and the number of programs conducted. It is expected that as in-service education is provided to county faculty that the audiences will increase in each specific outcome identified.

Report on Goal 7.2
Faculty Orientation and Training

Thirteen extension faculty across 9 IFAS units, including five departments, 3 extension offices and one REC conducted programs in this focus area. Four specific topic areas were addressed. The number in parentheses indicates the number of programs conducted in each area. (a) Cooperative Extension System Policies and Procedures (6); (b) Managing Faculty and Staff for Success (12); (c) Mentoring (13); and (d) Volunteer Leadership, Development and Management (5).

Outcomes reported were based on audience surveys. The number of people assessed and the % making the change are noted in parentheses. Two outcomes were assessed, (a) increase knowledge of extension programming methods (32 people, 84.4%); and (b) increase use of basic skills needed to become an effective extension education design programs for appropriate ages and stages of development (1 person, 100%).

There were a total of 302 days expended for all activities in the faculty orientation and training focus area. Activity areas include: advisory councils (15 days), classroom enrichment, (30 days), consultations (14 days), developing educational material (6 days), developing partnerships and collaborations (20 days), facilitating groups (20 days), funding efforts (9 days), group teaching events (52 days), in-service training (111 days), needs assessment (10 days), and program development (15 days).

The total group attendance for all programs in goal 7.2 was 279 with a majority (187) being male and 92 females. Of these 279 people; 140 reported White and 41 reported Black. Programs for the target audiences were split between: county extension faculty (11), extension support staff (3), IFAS administrators/supervisors (4), and state extension faculty (7).

In summary, this report indicates that state specialists and county extension faculty are working actively with a number of internal audiences by the topics addressed and the number of programs conducted. It is expected that the outcomes measured as part of this focus team will increase as

long-term evaluation is conducted with faculty who have completed various aspects of orientation and training.

Report on Goal 7.3
Effective Communication and Technology Use

Fourteen extension faculty across 17 IFAS units, including four departments, 12 extension offices and one REC conducted programs in this focus area. Two specific topic areas were addressed. The number in parentheses indicates the number of programs conducted for each of these areas: (a) Communication and Marketing (9); and (b) Instructional, Communication and Organization (11).

Outcomes reported were based on audience surveys. The number of people assessed and the % making the change are noted in parentheses. Four outcomes were assessed, (a) awareness of communication and marketing methods for internal and external audiences (500 people, 0%); (b) increased confidence in the use of appropriate technology (5 people, 100%); (c) increased knowledge of the uses of technology (510 people, 2%); and (d) integrate technology in educational programming (505 people, 1%).

There were a total of 161 days expended for all activities in the effective communication and technology focus area. Activity areas include: consultations (4 days), curriculum development (10 days), developing educational material (23 days), district events (5 days), fairs & exhibits (10 days), funding efforts (1 day), group teaching events (37 days), in-service training (19 days), needs assessment (8 days), and program development (44 days).

The total group attendance for all programs in goal 7.3 was 939 with a majority (410) being female and 379 males. Of these 939 people; 456 reported White, 27 Black, and 17 Hispanic. Programs for the target audiences were split between: county extension faculty (7), extension faculty (7), extension support staff (2), IFAS administrators/supervisors (6), state extension faculty (4), and volunteers (1).

In summary, this report indicates that state specialists and county extension faculty are working actively with a number of internal audiences (primarily) by the topics addressed and the number of programs conducted. It is expected that more outcomes will attained by clientele as this program progresses in the future.

Report on Goal 7.4
Personal and Organizational Health

Three extension faculty across four IFAS units, including one department and three extension offices conducted programs in this focus area. Four specific topic areas were addressed. The number in parentheses indicates the number of programs conducted in each area. (a) Entrepreneurship of extension (6); (b) Leadership (10); (c) Quality of work life (7); and (d) the "Scholarship" of extension (7).

Outcomes reported were based on audience surveys. The number of people assessed and the % making the change are noted in parentheses. Three outcomes were assessed, (a) evaluate program decisions utilizing critical and strategic thinking skills (40 people, 75%); (b) leadership skills

exhibited in clubs/committees/councils (34 people, 100%); and (c) utilize goal-setting strategies in prioritizing, decision-making, and time management (34 people, 100%).

There were a total of 154 days expended for all activities in the personal and organizational health focus area. Activity areas include: county events (34 days), developing partnerships and collaborations (30 days), program development (50 days), and state/national events (40 days).

The total group attendance for all programs in goal 7.4 was 3,084 with a majority (1,723) being female and 1,361 males. Of these 3,084 people; 2,642 reported White, 362 Black, 53 Hispanic, 16 Asian, and 11 AI/AK. Programs for the target audiences were split between: county extension faculty (2), extension support staff (1), IFAS administrators/supervisors (3), and state extension faculty (2).

In summary, this report indicates that state specialists and county extension faculty are working with a large number of internal audiences based on the topics addressed and the number of programs conducted.

Report on Goal 7.5
Administration and Supervision

Seventy seven extension faculty across 59 IFAS units, including three departments and 56 extension offices conducted programs in this focus area. Twelve specific topic areas were addressed. The number in parentheses indicates the number of programs conducted in each area. (a) Business Management (1); (b) Cooperative Extension System Policies and Procedures (41); (c) Fiscal Management (82); (d) Human Resource Management (67); (e) Managing Faculty and Staff for Success (86); (f) Marketing (1); (g) Office and Facilities Management (69); (h) Partnerships and Relationships (74); (i) Program Development and Management (68); (j) Public Policy (49); (k) Strategic Planning (61); and (l) Working with Volunteer and Advisory Groups (55).

Outcomes reported were based on audience surveys. The number of people assessed and the % making the change are noted in parentheses. Twenty outcomes were assessed, (a) Adequate facilities to meet needs of faculty, staff, and clientele (849 people, 100 %); (b) Develop increased self-esteem & self-confidence (60 people, 91.67%); (c) Development and implementation of training material (126 people, 100%); (d) Enhance interaction with county administrator, assistant administrators, and county government (119 people, 92.44%0; (e) Enhance efforts to recruit, hire, and train outstanding faculty and staff (35 people, 85.71%); (f) Enhanced interaction among CEDs, DEDs, Center Directors, Department Chairs, faculty and staff (35 people, 100%); (g) Enhance interaction with County Commissioners (151 people, 100%): (h) Enhanced program productivity resulting from volunteers and advisory group assistance (524 people, 96.95%); (i) Improved understanding of UF/IFAS CES, Research and Teaching mission (584 people, 100%); (j) Increased dependence by county government of Extension expertise (128 people, 100%); (k) Increased input into faculty program development (14 people, 100%); (l) Increased funding (928,863 people, 100%); (m) Interaction between DEDs, Center Directors, CEDs, Department Chairs, and UF/IFAS administration (25 people, 100%); (n) Interaction with County Administrators (1 person, 100%); (o) Manage a balanced budget (52 people, 100%); (p) Orientation of faculty and staff (44 people, 100%); (q) Successful collaboration with other agencies or groups (170 people, 98.24%); (r) Successful communication with volunteer and advisory groups (229 people, 100%); (s) Successful promotion, permanent status and tenure of faculty (1 person, 100%), and (t) Successfully meeting county and state expectations (158 people, 100%).

There were a total of 6,287 days expended for all activities in the administration and leadership focus area. Activity areas include: advisory councils (234.5 days), classroom enrichment, (3 days), consultations (581.5 days), county events (235 days), curriculum development (11 days), developing educational materials (14 days), developing partnerships and collaborations (2,364 days), facilitating groups (516 days), fairs & exhibits (25 days), funding efforts (763 days), group teaching events (115.5 days), in-service training (235 days), marketing (168 days), needs assessment (50 days), program development (878.5 days), reporting results (5 days), state/national events (21 days), and working with media (27 days).

The total group attendance for all programs in goal 7.5 was 51,461 with a majority (28,241) being male; 17,325 females; and 5,895 unknown. Of these 51,461 people, 38,870 people reported White; 5,216 Black; 1,279 Hispanic; 51 Asian; and 26 AI/AK. Programs for the target audiences stretched across: county government employees (31), donors and benefactors (35), extension faculty (62), federal government (6), Florida educational institutions (11), general public (25), government agencies (18), IFAS faculty and staff (26), Industry (21), local government (40), media (18), non-governmental organizations (28), organizations (10), professional associations (8), state government (14), students (5), and volunteers (34).

In summary, this report indicates that there is a significant number of faculty and administrators who are working in this focus area. The work has cut across many external and internal audiences for the topics addressed and the number of programs conducted. Significant change has resulted based upon the outcomes that were reported for this focus area.

Knowledge Areas: 901, 902, 903

Knowledge Area: 604; 610; 802; 803; 805; 806; 901; 902; 903

OUTCOMES		
Administration and Supervision		
Outcome	***Total Audience Surveyed***	***Percent of Target Audience Making Change***
Adequate facilities to meet needs of faculty, staff, and clientele	79	96.20%
Development and implementation of training material	46	100.00%
Enhance interaction with county administrators, assistant administrators, and county government	15	93.33%
Enhanced efforts to recruit, hire, and train outstanding faculty and staff	10	40.00%
Enhanced interaction with County Commissioners	7	100.00%
Increased dependence by county government on Extension expertise	7	71.43%
Increasing funding	5	100.00%
Orientation of faculty and staff	21	95.24%
Successfully meeting County and State expectations	46	95.65%
Effective Communication and Technology Use		
Outcome	***Total Audience***	***Percent of Target***

	Surveyed	*Audience Making Change*
Awareness of communication and marketing methods for internal and external audiences.	500	0.00%
Increased knowledge of the uses of technology.	500	0.00%
Integrate technology in educational programming.	500	0.00%

SOURCE OF FEDERAL FUNDS: Smith-Lever

SCOPE OF IMPACT: Multi-state Extension, Multi-state integrated, Integrated, state specific

States involved: AL; AZ; CA; DC; FL; GA; IA; ID; KY; MA; MO; MS; NC; OH; TX; VA; WA

IV ~RESEARCH SUMMARIES

1. NATURAL RESOURCES AND ENVIRONMENT (KA 101-141)

A. Summary--Florida's population growth and associated pressure on land, water, and natural resources of Florida in order to sustain the natural systems pose difficult choices. Research in the area of natural resources and environment addresses the use of soil, water, forest and range resources, natural resources and air and helps to provide factual information and direction. . These projects can range from aquatic life to the conservation and efficient use of water within the environment. Some research areas of interest include:

Landscape and Turf-grass Management - provides research that will ensure the successful establishment of landscape plants and turf-grass without polluting the environment or wasting resources. These projects range from the proper use of fertilizer in the landscape to the fate of pesticides on golf courses.

The Environmental Horticulture Program addresses the use of ornamental plants and turf-grasses for home and commercial landscapes and for beautification in the home and office. Today, teaching, research and extension programs blend current day recommendations with the need to maintain and enhance our environment and preserve our natural resources. Florida faces many challenges in the future with efficient water use and prevention of runoff, production of a broad range of plant material for distribution worldwide and the need for highly qualified individuals to fill critical industry jobs.

Landscape Conservation and Ecology – Florida, by virtue of its size, diversity, geographic location and multiple climatic zones provides unique opportunities for modeling a sustainable horticultural industry in subtropical and tropical regions throughout the world. The components of the success of this model are development of appropriate propagation and production techniques and introduction of new plants to the industry. Research to develop micropropagation techniques has led to rapid availability of sea oats and wetland plants for beach and landscape restoration. An additional component, invasive plant evaluation, is being addressed for existing plants and new plant introductions.

Consumer Horticulture-People, Plants and the Environment – research has been identifying and producing environmentally sound landscape and gardening practices for the citizens of Florida in order to sustain the natural beauty and protect the natural resources of Florida, and to promote quality of life for residents and tourists.

Natural Resources and Environment: Florida's population growth and associated pressures on land, water, and natural systems pose difficult policy choices for public officials. Environmental and resource problems and policies affect agriculture and Florida's rural communities. The need for research increases as the competition between agricultural and nonagricultural users of land and water intensifies. These conflicting issues are clearly part of the management challenge in commercial agriculture. Natural

resource and environmental economics, including marine economics, are the primary subject matter for research projects in this area.

Soil, Plant, Water and Nutrient Relationships

Both Pb and arsenic contamination in soils and groundwater has been a concern for the public due to the extensive contamination and toxicity to humans. Some studies in this area were conducted to determine the feasibility of using chemical (P-induced Pb immobilization) and biological (plant-based phytoextraction) methods in cleaning up metal contaminants soils and groundwater.

Forestry

Agroecosystems, especially small-scale production systems in the southeastern United States, are challenged as never before with natural resource management problems. According to USDA Census of Agriculture (2002), 88 percent of farms in Florida are considered small farms (annual sales less than $250,000), 84 percent of which are individually or family owned; but they constitute 56 percent of total agricultural income in the state. Similarly, out of the 6.6 million hectares (16.3 million acres) of forestlands in Florida, 52 percent are non-industrial private lands. Clearly, small farms and timber operations are significant drivers of the state's economy. These small-scale operations are under increasing pressures – if not threats – caused by various changes. The increasing impact of a rapidly urbanizing landscape on the wildland-urban interface creates significant changes in ecosystem characteristics such as increased fire danger, changes in water drainage patterns leading to soil erosion and flooding, and fragmentation of wildlife habitat. Agricultural non-point source pollution is a significant cause of stream and lake contamination and prevents attainment of water quality goals in the Clean Water Act. The problem of phosphorus (P) loss from soil is a major concern in fertilized agricultural and forestry enterprises, particularly in coarse-textured, poorly drained soils of the southeast, where drainage water ultimately mixes with surface water. The potential for P loss from fertilized pastures resulting in water quality degradation is a particularly serious issue. Faced with these consequences of rapid land-use changes, research related to the small-farm community of the Southeast is under pressure identify land management practices that are economically and ecologically sustainable. Integrated systems such as agroforestry that provide economic advantages of diversified production as well as ecological benefits of mixed systems seem appropriate in this scenario.

Management and Range Resources

The responses of Florida savanna plants to fire, grazing, and introduced species is poorly understood. Projects in this area specifically examined long-term responses of tree and grass populations under experimental treatments of fire and grazing in order to improve management recommendations.

B. Knowledge Areas: 101, 102, 111, 121, 122, 132, 133, 134, 135

C. IMPACTS

Soil, Plant, Water Nutrient Relationship
UF/IFAS research has shown that phosphate-induced Pb immobilization in contaminated soil and phytoremediation of arsenic contaminated soils and water are cost-effective and environment-friendly technologies that can be used to remediate metal contaminated sites.

Groundwater contamination
Florida IFAS Research has participated in several field-scale studies demonstrating the clean-up of aquifers contaminated by oils and other carcinogens such as trichloroethylene. In most of these studies, more than 70 percent of the contaminants were removed from the subsurface by remedial technologies. However, the benefit of partial clean-up of contaminated sites has been a contentious issue in both the scientific and regulatory communities. Laboratory and mathematical modeling studies have extended these field results by analyzing the risk reduction accrued by partial removal of contaminants from aquifers. Research have demonstrated that the contaminant elution dynamics are controlled by the combined effects of spatial heterogeneities in the aquifer hydrodynamic properties and the contaminant location. Laboratory experiments, modeling, and field results indicate that the degree of spatial variability found at real field sites will lead to measurable risk reductions with even moderate reductions in the amount of contaminant mass present. It is hoped that these results will stimulate the further implementation of remedial technologies at contaminated sites.

Wetland restoration
UF/IFAS research has developed a mathematical model to describe the coupled effects of both hydrologic and biogeochemical processes in wetlands systems. This model was used to predict phosphorus mobility in the northern Everglades, where over the past several decades, agricultural drainage waters discharged into the northern Everglades have been enriched in phosphorus (P) relative to the historic rain fall driven inputs. Phosphorus enrichment has occurred in natural soils, and the open water sloughs have become colonized by monospecific stands of cattails. While methods of reducing total P concentrations in the discharge water have been actively pursued, the effects of low-P water moving over the enriched soils have not been fully addressed. Model results suggest that if the proposed input concentration limit of 10 ppb total P is met, the soil-P will be released such that the impacted region will expand spatially. Although P movement through the marsh is slow due to biological sequestration, eventually all of the load over the past several decades will become mobilized through diffusion into the low-P water column. The release of soil P is expected to result in water column concentrations of greater than 10 ppb for over 100 years after targets are met. These results have implications for resource managers who may consider restoration alternatives such as physically isolating the impacted region to retain the accrued

Management of Range Resources:

Methods of managing the invasive, exotic paragrass will provide waterfowl habitat managers means of improving the quality of impoundments. Knowledge of wildlife movements in relation of fire are improving fire prescriptions, reducing negative impacts to these species and supporting continued use of fire. Use of fire refugia will improve overall fire management in the scrub ecosystem.

D. SOURCE OF FEDERAL FUNDS: Hatch
E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

2. PLANTS AND THEIR SYSTEMS (KA 201-216)

A. Summary

Plants and their systems include research in the areas of plant production and plant protection. Without plant life there could be no agriculture, and the systematic production and utilization of a major group of plants – a keystone of agriculture. Florida IFAS research is responsible for investigating and reporting finds necessary to ensure that this keystone remains strong, dynamic, relevant and intact. The size and diversity of the domestic industry and the world-wide importance of fruits and vegetables in human nutrition and economic development related to plants in landscape emphasize the need for consolidation of resources to accomplish this purpose. Some areas of research that are included and use Hatch funds are:

Biological Control of Pests Affecting Plants

The use of plant pathogens as bioherbicides has been a feasible method of weed control in several cases. Two registered bioherbicides, Collego and DeVine, are sold in the United States. Development and use of bioherbicides can help to diversify weed control options, supplement chemical herbicides, and provide an alternative to methyl bromide. Several projects studies the development of several bioherbicide agents shown to be effective in small-scale and noncommercial trials.

Agronomy
The main aim of Agronomy research in Florida is to discover, develop, evaluate and disseminate knowledge and information necessary to support the agronomic-related industries of the State and nation, and to promote and enhance the production and utilization of agronomic commodities and the management of pest plant species for the benefit of society.

Water Management and Plant Nutrition – Research in this area is identifying, developing and disseminating environmentally and economically sound technologies that will increase production and utilization efficiencies as well as protect or improve environmental quality. Research is providing significant results leading to water

conservation in nurseries, landscapes and on golf courses. New research is addressing the water and fertilizer requirements of turf-grasses and landscape plants.

Biotechnology, Plant Breeding and New Crop Development – Through research IFAS scientists are striving to develop horticultural characteristics, disease and host/plant resistance through classical genetics and molecular techniques, allowing the creation of marketable products for consumers. Today, the floral biotechnology program is among the leading programs nationally and internationally.

Plant Production Management – Through the work of research plant production management is a source of sound research-based information being made available to the professional horticultural industry, the scientific community and the consumer/student. These projects are viewed as leading in crop production and physiology information and will set an example for the industry in environmentally safe practices.

Horticulture
In the area of horticulture, research is solving immediate technical problems facing the fruit and vegetable industries. They are developing new information, materials and techniques to increase the efficiency of production, harvest and post-harvest handling. Their mission is to develop basic information on the genetics, growth, development and senescence of these crops through a continuous reservoir of research in breeding and genetics, biotechnology and molecular biology, biochemistry, and physiology that is at the forefront of knowledge applicable immediately or in the future.

Plant Product Quality
In this area plants such as strawberry cultivars are being developed that improve quality characteristics. This is especially important in Florida where strawberries are an important crop.

B. Knowledge Areas: 201, 202, 203, 204, 205, 206, 211, 212, 213, 215, 216

C. Impacts

Environmental horticulture
This past year, members of the Florida Nursery, Growers and Landscape Association as well as other plant producers representing Broward, Dade, and Palm Beach counties were convened along with representatives from governmental agencies, associations, and educational institutions. The goal of these meetings was to establish priority BMPs that were currently being used or could be readily adopted to either minimize or reduce offsite nutrient movement into the canals. This process evolved into a draft document titled South Florida Container Nursery BMP Guide (http://floridaagwaterpolicy.com). Once adopted by statutory rule, producers implementing BMPs and keeping appropriate records are exempt from costs associated with the clean up of ground and surface water contaminated with phosphorus or other constituents, and these producers are presumed to be in compliance with state water quality standards. Research conducted at UF and other collaborating universities was pivotal in guiding the rule development process because

research-based information determines the “best” practices that become specified by the rule.

In the future, nursery businesses will spend more time than in the past accounting for production activities and communicating positive environmental benefits of their management practices. BMPs provide the nurseries a common format for accountability and communication. Being a part of the accountability process during development is very important for nurseries. But it is equally important for IFAS to ensure that research-based information forms the backbone of BMPs through the research projects being currently conducted in this area.

Biological Control of Pests Affecting Plants

The phytochemical methods for weed suppression using Red cedar and Magnolia woodchip mulches have been found to be useful for reducing the amount of chemical herbicides. There is potential for extracting bioherbicides from selected plant species for use in crop production systems.

Genetics

The strength of the Genetics research Program Area has been in traditional, applied breeding programs to develop improved cultivars of forages, legumes, sugarcane and small grains. Forage and field crop scientists in IFAS have released over 230 crop cultivars since the early 1900s and continue to make progress in this area. Molecular biology programs are now making significant contributions to the more traditional forage, peanut, and sugarcane breeding programs.

Management and Nutrition Program

National and international strengths in this program include forage evaluation, management, and utilization; diversified row crop and forage management; conservation tillage, multiple cropping systems; utilization of urban and agricultural wastes as nutrient sources for crop production; and alternative crop plants. Emphasis has recently been placed on environmental impacts of forage production practices. Management recommendations have been developed through research that facilitate increased efficiency of nutrient cycling in grazed pastures and use of dairy wastes for production of forage crops while minimizing environmental impacts. For field crops, an important strength has been the presence of a highly diversified crop management team that possesses expertise and carries out research in the area of cultivation practices of numerous crop plants including peanut, cotton, tobacco, corn, small grains, soybean, sugarcane and rice.

Plant Product Quality

Some projects in this area provided valuable information to the strawberry industry on which cultivars produce the highest quality berries in Florida.

Weed Science

Weed scientists have developed, evaluated and implemented weed management strategies for terrestrial and aquatic weeds in temperate, subtropical and tropical environments. Current research strengths include biology, molecular genetics, and physiology of weed species; aquatic and invasive plant research and management; weed management strategies for southeastern cropping systems; weed/crop interference mechanisms; computer decision modeling; wetland mitigation; and pasture, rangeland and non-crop weed management systems.

Physiology and Ecology

Traditional strengths have been documenting and understanding the physiology of crops at the leaf, whole plant and crop canopy levels, particularly in response to global climate change factors and other environmental factors, and development of computer simulations of crop growth, development, and yield. Significant contributions include documenting crop responses to rising carbon dioxide and climate change factors and development of crop simulation growth models for grain legumes that incorporate physiological mechanisms and allow assessment of hypothetical responses to climate change, crop management and genetic improvement.

D. SOURCE OF FEDERAL FUNDS: Hatch

E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

3. ANIMALS AND THEIR SYSTEMS (KA 301-315)

A. Summary

The primary mission of the IFAS statewide animal sciences program in the area of research is to provide critical information needed to assist the livestock industries of Florida to achieve efficient production by contributing to the solution of livestock production problems through research. This mission is accomplished through the integration of research both at the University of Florida and research facilities such as the Department of Animal Sciences, the Range Cattle Research and Education Center (Ona), the North Florida Research and Education Center (Marianna), the Subtropical agricultural Research Station, USDA-ARS (Brooksville) and the sixty-seven county extension facilities. Research in the area of animals includes issues related to animal production and protection. Included in this area but not inclusive are:

Reproduction Performance

The advancement in vitro embryo technologies are still quite inefficient due to associated problems with early embryonic loss, large offspring syndrome, and postnatal mortality . The purpose of one project in Florida is twofold: 1) to devise rapid methods for assessing viability in preimplantation bovine embryos for increased survival; and 2) determine how in vitro culture conditions effect the expression of Insulin-like Growth Factor (IGF) family members.

Nutrient utilization in animals

Management practices, diets fed and shortened dry periods are being evaluated in several projects involving dairy cows. The purpose of one of the studies is to examine the effectiveness of available technology, feeding management, and short dry periods to improve the feed intake of dairy cows around calving. The purpose is to improve their intake of feed, reduce their health problems and allow high milk production after calving. The project also examines whether it is possible to speed-up the dry-off of mammary tissue by using estrogen at the time of dry-off and thereby reduce the standard 60-day dry period in half.

Animal Physiological Process

In the area of research on horses, it is known that horses are tolerant to continuous GnRH stimulation, which raises the question of how the GnRH receptor can tolerate continuous ligand stimulation without undergoing cell response attenuation. The purpose of one project is to understand how the equine GnRH receptor can tolerate continuous ligand stimulation without undergoing response attenuation.

B. Knowledge Areas: 301, 302, 303, 304, 305, 307, 311, 312

C. Impacts

Animal Sciences balanced research programs range from impacts in the areas of basic research in molecular biology and cloning to applied livestock production research conducted at cooperator farms. Some research areas of major focus include, improving bovine embryo survival, improving the efficiency of dairy and beef production, improving the skeletal development of the horse through improved nutrition, improving reproductive efficiency of the horse, developing systems for utilizing by-products and waste materials in animal production and developing new or improved meat and poultry products. These major focus areas are addressed through research in reproductive physiology, nutrition, animal breeding and genetics, molecular biology, meat and poultry products and livestock management systems. Some more specific impacts are:

Reproduction Performance

Methods that improve embryo survival and enhance our ability to assess the embryo's ability to survive that greatly increase efficiencies of the artificial reproductive technologies, namely cloning and in vitro embryo production. These Improved efficiencies reduce costs, making these technologies more feasible for use by cattle producers and allow for increased production of genetically superior animals.

Nutrient Utilization in Animals

The occurrence of several different metabolic diseases is greater during the transition period than at any other time during the lactation cycle of the dairy cow. Higher incidences of these diseases seem to be associated with reduced feed intake and greater

energy deficit during the late prepartum and early postpartum periods. The sudden start of milk production after calving places a great strain on the metabolism of the cow as she tries to support the function of the mammary gland. This strain is exacerbated if feed intake is reduced before calving and/or is too slow to increase after calving. This often leads to a shortage of available glucose and other metabolites that are needed to support milk synthesis which then results in too great a mobilization of lipids and their storage in the liver. Research in this area has defined the extent of this problem and then evaluated ways to limit the extent of feed reduction and liver lipid accumulation and to increase the availability of glucose if there is reduced feed intake. Researchers have done this by using low doses of bST to improve feed intake and body metabolism and to supply additional glucogenic precursors to offset this limitation. These strategies have been used jointly and singly to evaluate the best practices to implement as a way to improve transition period feed intake and metabolism. This research has been limited to those strategies that could be implemented on commercial dairy farms.

Animal Physiological Processes

The impact of this research area is a clearer understanding of the role of LH in ovulation in mares. Reduction of LH, by administration of progesterone or progesterone plus estradiol reduced the tissue remodeling enzymes within the follicle, suggesting that a key role for LH is to provide an environment of tissue remodeling to permit follicular development to the point of reaching the ovulation fossa. This information will pave the way for development of techniques to enhance the tissue remodeling process, and gain a better control of ovulation. Similarly, the finding that an aromatase inhibitor did not cause ovulation failure provides focus on the mechanisms by which LH is released during the preovulatory period in mares. These results will also provide understanding that can lead to improved methods of ovulation induction, or monitoring that will improve reproductive efficiency in mares.

D. **SOURCE OF FEDERAL FUNDS: Hatch**

E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

4. AGRICULTURAL, NATURAL RESOURCE, AND BIOLOGICAL ENGINEERING (KA 401-405)

A. Summary
B. Knowledge Areas: No Hatch Projects
C. Impacts
D. SOURCE OF FEDERAL FUNDS: No Hatch Projects under this section
E. SCOPE OF IMPACT:

5. FOOD AND NON-FOOD PRODUCTS: DEVELOPMENT, PROCESSING, QUALITY, AND DELIVERY (KA 501-512)

A. Summary:

This area addresses the needs in the development, processing, quality and delivery of food and non-food products. In this area Hatch research projects have been conducted in both areas. Some examples include:

Postharvest/Post Production

Research in this area address the needs of the foliage and floriculture market chain. Currently the best interior evaluation facilities in the US are located within IFAS and IFAS has the only department with a program nationally addressing whole plant longevity on a broad scale. Major emphasis is placed on research to improve the performance of fresh cut flowers for the consumer.

Food and Agriculture

Florida ranks as a major agricultural state and often leads the nation in the production of a wide variety of agricultural commodities. Before reaching the consumer, each product moves through a unique marketing channel often involving grading, processing, packaging, transporting, international trade, wholesaling and retailing. The provision of inputs and services to the agricultural sector also involves significant economic activity. Agricultural businesses must cope with increased regulatory pressure, shifting consumer preferences regarding food safety and environmental protection as well as dealing with emerging opportunities through biotechnology. Agribusiness, farm management and production economics, marketing, international trade and competition, and consumer economics are among the subject matter that is the concern of Florida IFAS research.

New and Improved Food Processing Technologies

Value-added by-products research requires strong product utilization and processing industry support to maintain industry prominence in International markets. By-products research allows development of processing and utilization schemes to profitably deal with waste utilization, rather than pay disposal costs.

New and Improved Non-Food Products and Processes

Genetic manipulations to improve ethanol production in Z. mobilis are complicated by enzymes that prevent introduction of foreign DNA into the bacteria. The purpose of some projects in this area is to determine the factors that limit the efficiency of transfer of foreign genes into Z. mobilis and to produce new strains which will be more amenable to genetic engineering which may be used to enhance their fuel ethanol production.

B. Knowledge Areas: 501, 502, 503, 504, 511, 512

C. Impacts
Some impacts in Hatch projects in the area of food and non-food products: development, processing, quality, and delivery include the following areas:

New and Improved Food Processing Technologies
Research pertinent to the worldwide citrus processing and by-products industries has economic impact through quality improvement of products and increasing manufacturing efficiency

New and Improved Non-Food Products and Processes

A restriction endonuclease gene and DNA methyl transferase gene have been cloned from Z. mobilis. Inactivation of the restriction endonuclease gene and any other restriction endonuclease genes may greatly enhance the ability to transfer of foreign genes into Z. mobilis to convert the organism into a more useful biocatalysts in exploitation of potential renewable energy sources for fuel ethanol production. Characterization of the putative cells cycle regulatory function of the DNA methyl transferase will provide a better understanding of growth regulation in Z. moblis. The experimental approach developed in this study for the enhancement of the genetic manipulation of Z. mobilis should provide a general approach to modify and improve the genetics of other organisms that may be useful in generation of energy sources or organic substrates from renewable resources.

D. SOURCE OF FEDERAL FUNDS: Hatch
E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

6. ECONOMICS, MARKETS, AND POLICY (KA 601-611)
A. Summary:
Economic development generally refers to targeted programs designed to enable people to raise overall per capita incomes or to improve circumstances for specific disadvantaged populations. The emphasis of the area is the enhancement of people's capacity to acquire and manage resources effectively, understand markets and policy related to these elements. Presently, economic transitions underway in rural Florida result in pockets of economic disadvantage. Public and private managers must cope with the costs of economic change and must be able to influence both the pattern and pace of growth. Insights are sometimes obtained from problem-solving work in other locations that may be applicable in Florida. Rural economic development, international development, economic impact analysis, domestic policy analysis and agricultural labor subject matter are also of interest. Some specific areas where Hatch research is taking place in IFAS include:

Economics of Agricultural Production and Farm Management

Citrus remains the most important crop produced in Florida. Florida citrus producers face a number of challenges including increased foreign competition, adoption of new technology including mechanical harvesting, and threats from invasive pests. This intent of one project in this area is to provide economic analysis of the issues confronting Florida including assessment of the competitive position of the citrus industry.

Marketing and Distribution Practices

Understanding more about the factors that influence consumers' subjective perceptions about food consumption will allow agribusinesses, agricultural producers, and policy makers to respond more effectively to consumer concerns. One Hatch project is designed to improve our understanding of the effects of consumer tastes and preferences, including food safety, on Florida agriculture.

International Trade and Development

International trade and development of new markets is important to Florida's agricultural industries. This includes the understanding and development of policy necessary for improved development of international trade. One project seeks to evaluate how the relative economic size of Caribbean Basin countries will condition their ability to realize the full economic benefits of trade liberalization and integration efforts in the Western Hemisphere.

B. Knowledge Areas: 601, 603, 604, 605, 606, 607, 609, 610

C. Impacts:

Some impacts from Hatch projects related to economics, markets and development include:

Policy and Biotechnology

Labels for food products containing material from genetically modified (GM) crops have been the subject of consumer scrutiny and some policy discussion. Interestingly, the development of recombinant DNA techniques for transforming agricultural plants and animals, as well as for food processing and animal drugs, has been the focus of controversy for more than 20 years. The debate reached one peak within the United States in connection with the approval process for bovine somatotropin within the dairy industry, only to resurface again in connection with European and Japanese consumer rejection of transgenic maize and soy. The highly visible political controversy over biotechnology has made the debate a prominent place for the consideration of virtually every ethical concern associated with food and agriculture. Indeed, agricultural biotechnology is debated in terms of food safety and consumer consent, the broader environmental effects of its use in crop and livestock production, its impact on the structure of agriculture, and its potential to address problems of hunger on a global basis, and, of course, its place in the global market.

Each of these issues might be raised with respect to many technologies that affect production practices in the food system. It is accurate to say that many of the real issues have little to do with the use of transgenic technology. Yet such a statement also is misleading by virtue of the way that biotechnology has come to symbolize the broad pattern of technological change within the food system for the broader public. The controversy over biotechnology thus is ethically significant because it signals a current of dissatisfaction within a subset of the public regarding general social and technological trends in the food system, and because it illustrates the frustration that segment of the population feels over its inability to influence policy. Here, biotechnology also connects with the general issue of consumer trust in science. Based on IFAS research, scientists and faculty are able to bring science based information into the discussion.

Economics of Agricultural Production and Farm Management

Florida is the second largest citrus producing region in the world and the largest supplier of orange juice is the U.S. market. Federal trade policy has focused on a Free Trade of the Americas Agreement which has included discussions on reducing or eliminating the FCOJ import tariff. The loss of the FCOJ tariff would enable foreign citrus production (e.g., Sao Paulo, BRAZIL) to become more cost competitive and potentially reducing Florida citrus growers' returns. The cost-benefit analysis of eradicating evasive pests such as citrus canker enables plant regulatory policy officials to evaluate the potential economic impact of Florida's citrus canker eradication program. Policy decisions on both the federal trade issue and the citrus canker evasive pest eradication program could have a negative impact on the annual $9.1 billion and the 90 thousand jobs that Florida's citrus industry contributes to Florida's state economy. This kind of information obtained from science-based research is critical to making informed decisions and U.S. and state policy.

Marketing and Distribution Practices

The research examining consumer perceptions of genetically modified foods has had a significant impact in a number of arenas. Consumer perceptions of varying types of genetically modified foods have important implications for public policy and marketing of agricultural commodities. IFAS research is beginning to address some of the important questions posed by policy makers and the biotechnology industry, potentially making future policy and marketing campaigns more effective. The research for example on consumer opinions of seafood and crawfish is important because it can provide information to the growing seafood industry on how to target specific market segments. The research on food irradiation and organic food perceptions can be used to better understand consumer demand.

Marketing and Distribution Practices

Analysis in one project is providing valuable information regarding trade-related issues of Caribbean Basin Countries that can be used for developing both markets and policy.

D. SOURCE OF FEDERAL FUNDS: Hatch

E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

7. HUMAN NUTRITION, FOOD SAFETY, AND HUMAN HEALTH AND WELL-BEING (KA 701-724)

A. Summary

Research in this area can be divided into three broad categories: food science, human nutrition and human health. Research in the area of human nutrition, food safety, and human health and well-being addresses problems and opportunities important to the food industry and quality of life in Florida and throughout the world. Research projects in the area of human nutrition involve many of the commodities important in Florida, including seafood and aquaculture products, citrus, fresh fruits and vegetables, and dairy products. Other research areas include food safety and microbiology issues, food processing and new method development, quality and sensory aspects of foods, and composition and chemistry of foods. Research in the area of human nutrition addresses basic and applied aspects of human nutrition in efforts to improve the health and wellness of Floridians and the world population, and includes studies on gene regulation, immunity, and women's health. Research areas include the function and biochemistry of micronutrients, the role of water-soluble vitamins in the health of various populations, the effects of phytochemicals and nutrient supplements on health, and the development of education programs for improved nutrition and health. Some Hatch projects include the following areas:

Human Health:

Mosquito-borne pathogens present a significant health risk to Florida residents, domestic animals and wildlife. This project helps identify periods when the risk of disease transmission is unusually high in Florida.

Requirements and Function of Nutrients and Other Food Components

Folate is a vitamin with important health implications. Impaired folate status has been associated with increased risk for birth defects, vascular disease, cancer, and cognitive dysfunction. Studying the relationship between folate status, genetic make-up and chronic disease risk may provide clues for improving human health that can be translated into nutrition education programs for the public.

B. Knowledge Areas: 702, 703, 712, 721,722, 723

C. Impacts:

Impacts related to human health and nutrition are of extreme importance in a state with a population of more than 20 million. Some major impacts from Hatch research projects include:

Human Health

Infection of humans and domestic animals by mosquito transmitted viruses poses a significant public health threat in Florida. The development of long-term surveillance protocols at the FMEL allows the real-time prediction and reporting (at http://eis.ifas.ufl.edu) of pre-epidemic conditions, thus allowing sufficient time for appropriate public health responses including vector control, media contact, and issuance of Medical Advisories and Medical Alerts prior to the onset of epidemic transmission.

Food Safety

Food safety is an ethical issue in part because, in the modern food production-transportation-processing-wholesaling-retailing chain, foods can be exposed to chemicals or microbial pathogens, or simply can be mishandled. Consumers on their own may not be able to tell whether the foods they purchase and eat will put them at risk for sickness or disease or even allergic reactions. Under what is known as a "rights approach" to ethical analysis – the primary ethical responsibility people have is to respect each others' rights – food safety takes on particular significance because the rights approach demands that people not be placed at risk against their will. The complexity and lack of transparency of the food production system implies that government agencies such as the Environmental Protection Agency, the U.S. Food and Drug Administration, and public health departments have an important role in protecting rights. One way they do this is by attempting to ensure that food is safe. One problem is that determining "safety" is not so simple: "safe" implies a value judgment that potential hazards have been adequately analyzed and that any remaining risks are "acceptable." Some people question whether those responsible for ensuring safety really operate under a "protect rights" regime, or whether an alternative ethical approach, the so–called "utilitarian" (greatest social net value) approach is employed. Under a utilitarian regime, judgments about "relative safety" can sometimes inadvertently place certain individuals at risk (e.g., those with unique allergies).

In light of occasional food scares and lapses in the regulatory system, questions have to be raised about the appropriateness and thoroughness of many scientific risk analyses and assessments of safety. In general, because of IFAS research it is possible for lawmakers and other stakeholders to have scientific based facts that allow for calls for stricter evaluations of certain chemicals and genetically engineered foods, more inspections of processing plants and grocery stores, and thorough product labeling all reflect the ethical demand that consumers be protected from exposure to (real and perceived) risks associated with foods, i.e., have their rights protected. This same information can be used in dealing with the increasing demand for so-called "Country of Origin" labels that would help alleviate concerns about whether foods imported from nations with less stringent environmental regulations are safe to eat.

Requirements and Function of Nutrients and Other Food Components

Understanding the relationships among folate and vitamin B12 status/intake, common genetic variations, and altered metabolic function help to better define optimal nutrient requirements for specific populations and identify those populations at greatest risk and for whom targeted intervention strategies would be most important. In conjunction with our efforts to provide health care providers with the latest research findings and tools to use to motivate consumers to adopt dietary behaviors associated with risk reduction, our research program has the potential to reduce health care costs, morbidity, and premature death. The long term economic impact of this research is significant in a state like Florida where vascular disease, cancer, stroke, and Alzheimer's are leading causes of death.

D. SOURCE OF FEDERAL FUNDS: Hatch

E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

8. FAMILIES, YOUTH, AND COMMUNITIES (KA 801-806)

A. Summary:

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

Youth Development

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

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

B. Knowledge Areas: 802

C. Impacts:

Youth Development

Florida Research has recently completed several studies that have examined the effectiveness of prevention programs to reduce youth crime and violence in schools and communities in the major urban area of Palm Beach County, the fourteenth largest school district in the United States and the location of a major school shooting in the United States. A longitudinal research-based evaluation study was recently completed on the first eight years of the Palm Beach County Youth Court, a program established by the Palm Beach County School District School Police Department for juvenile first offenders. The goal of this program is to keep youth from having a criminal record and from potentially becoming repeat offenders. The evaluation study examined the effectiveness of the court processing, the changing trends in patterns of youth crime and violence, and locations of these crimes. It explored the use of sanctions for these offenses and the impact of significant people on the youth participating in the study. The Palm Beach County Youth Court program provides four benefits to their local community: accountability, timeliness, cost savings, and community cohesion. Research being conducted this year on the effectiveness on the youth court will continue to explore the relationships between the key participants as well as examine risk and protective factors related to these changing trends.

Another project examined the effects of Aggressors, Victims and Bystanders. This is a conflict resolution program curriculum that is designed to provide bystanders – which includes most individuals within a school community – with the combination of problem-solving skills and supported help-seeking strategies they need to take positive steps to prevent violence. This study examined the effectiveness of this program in order to determine its full impact in terms of reducing youth crime and violence, as well as building positive steps and skills to increase youth preparedness in conflict situations.

It was determined that the program did have impact, particularly in the areas of improving how students handle conflict and violence in the school environment in the following specific areas: how choices and actions can prevent conflicts from escalating into fights; how attitudes and beliefs regarding conflict and violence and habits of thought affect the way they deal with conflict; ways to stay calm and think clearly during heated conflict; ways to address and incorporate different points of view and define problems in ways that relieve conduct; and how language can be an important tool in alleviating conflict and preventing fights

D. SOURCE OF FEDERAL FUNDS: Hatch

E. SCOPE OF IMPACT: Multi-state Research, Multi-state integrated, Integrated, state specific

9. PROGRAM AND PROJECT SUPPORT, AND ADMINISTRATION, EDUCATION, AND COMMUNICATION (KA 901-903)
A. Summary

B. Knowledge Areas: no Hatch Projects
C. Impact
D. **SOURCE OF FEDERAL FUNDS: No Hatch projects in this section**
E. SCOPE OF IMPACT:

V ~ MULTI-STATE AND INTEGRATED ACTIVITES SUMMARY

In 2005, Florida IFAS expended over 25% of Smith-Lever and Hatch funding in extension integrated and multi-state programs and research integrated. In 2004 after five years of working on an online accountability system for IFAS faculty a dynamic software was completed that now allows the Florida land grant colleges to capture all state and county activities in research (1862), teaching (1862) and extension (1890, 1862). Florida is able to do a much better job now of collecting needed information to show integration between research and extension and also multi-state activities that are based on federal funding.

Florida Extension continues to look for better ways to expand integration and multi-state activities:

- Through the extension strategic plan Florida has focused programs in a way that allows state aggregation of data. Through this focus of planned programs Florida is able to address the critical issues of strategic importance especially those identified by stakeholders. We are better able to see where we have met these critical needs and where we can improve.
- Through the faculty accountability reporting system (Unifas) we are able to obtained state aggregated numbers that specifically address the needs of under-served and under-represented populations in Florida. The resulting breakdown by minority and gender and outcomes from programs addressing these needs show that we have been successful during 2005 in reaching these audiences
- As part of the strategic process research and extension are integrating in a more formal, measurable manner. This process is ongoing through 2006.
- Extension districts along state lines have collaborated with Georgia and Alabama to develop annual tri-state workshops over the past five years that have increase the level of multi-state activity and reduced duplication of efforts.
- There has been a marked increase in state faculty involved in multi-state activities developed through needs assessments identified at regional and national conferences.
- Communication through websites and emails have increased interest, understanding and involvement in integrated and multi-state programs. The IFAS Extension website "Solutions for Your life" began development in 2005 and is slated for release in 2006. This website will provide access to Extension educational materials and publications.
- Research and extension administration are supportive of each other and actively involved in website concept.
- State and county faculty are supportive and actively involved in developing stronger collaborations through multi-state, multi-county, and integrated activities.

In summary: Florida Extension and Research at UF and FAMU continue to examine ways that will allow us to more clearly design, implement and report multi-state and integrated activities. Florida administration, faculty and staff are fully behind the process as we strive to meet the needs of our constituents.

VI ~MULTISTATE EXTENSION AND INTEGRATED ACTIVITIES

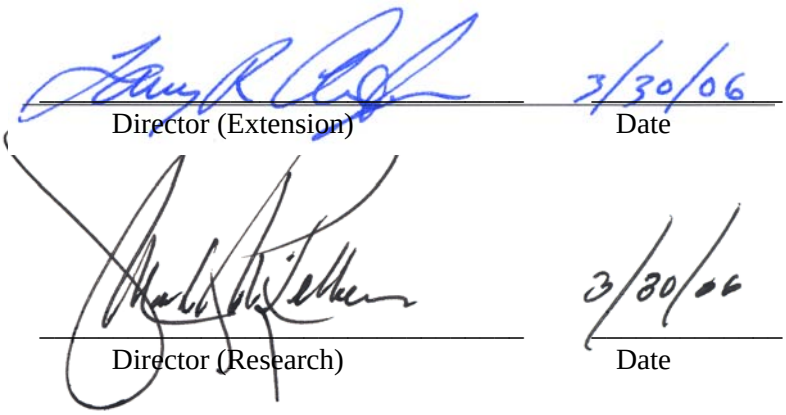
U.S. Department of Agriculture
Cooperative State Research, Education, and Extension Service
Supplement to the Annual Report of Accomplishments and Results
Actual Expenditures of Federal Funding for Multistate Extension and Integrated Activities
(Attach Brief Summaries)

Fiscal Year: 2005
Select One: ☐ Interim ☒ Final
Institution: University of Florida
State: Florida

	Integrated Activities (Hatch-McInt.)	Multistate Extension Activities (Smith-Lever)	Integrated Activities (Smith-Lever)
Established Target %	25%	25%	25%
This FY Allocation (from 1088)	$2,641,544	$4,009,246	$4,009,246
This FY Target Amount	$660,386	$1,002,311.50	$1,002,311.50
Title of Planned Program Activity			
I. To enhance and maintain agricultural and food systems		$608,968	$867,356
II. To maintain and enhance Florida's environment		$132,680	$262,024
III. To develop responsible and productive youth through 4-H and other youth programs		$294,351	$14,152
IV. To create and maintain Florida friendly landscapes: The smart way to grow		$100,965	$100,935
V. To assist individuals and families to achieve economic well-being and life quality		$268,075	$49,964
VI. Healthy Communities		$15,163	$25,368
VII. To promote professional development activities designed to enhance organizational efficiency and effectiveness		$64,828	$36,152
Biological Control of Scapteriscus Mole Crickets	$29,820		
Biological Control of Soilborne Plant Pathogens for Sustainable Agriculture	$11,184		
Biology and Management of Arthropod Pests of Vegetables	$282,083		
Biology and Management of Scale Insects (hemiptera: Sternorrhyncha: Coccoidea) on Tropical Woody Plants and Palms.	$11,193		
Biorational Methods For Insect Pest Management (ipm): Bioorganic And Molecular Approaches	$11,186		
Chemical Ecology and Management of Insect Pests of Blueberry, Vaccinium spp., in Florida	$25,335		
Citrus By-products and Processing Technology Development	$62,088		
Consumer Attitudes and Preferences Regarding Florida Agricultural Products.	$12,702		
Cultural Systems for Specialty Cut Flowers and Other New Ornamental Crops for Florida	$85,040		
Development of Ecological Methods for Nematode Management	$19,077		
Development of New Potato Clones for Improved Pest Resistance, Marketability, and Sustainability in the Eastern	$1,600		

United States				
Economic Analysis of the Florida Citrus Industry Competing in a Global Market		$1,194		
Enhancing Food Safety and Quality Through Technologies and Consumer Research		$4,000		
	Total:	**$884,581**	**$1,485,031**	**$1,355,950**
	Carryover:	**0**	**0**	**0**

Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays represented here accurately reflect allowable expenditures of Federal funds only in satisfying AREERA requirements.



Director (Extension) Date

Director (Research) Date

VII ~ STATISTICAL TABLES

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
1862 Extension	$1,643,790	$360,562	$801,849	$481,109	$721,936	$4,009,246
1862 Hatch	$1,365,685	$199,810	$44,853	$436,775	$46,837	2,093,960
1862 McIntire Stennis	$ 361,759	$ 50,983	$11,445	$111,447	$11,951	$ 547,584
1862 Research Total	$1,727,444	$250,793	$56,297	$548,222	$58,788	$2,641,544
1890 Extension	$626,586	$210,282	$158,370	$99,159	$285,781	$1,380,178
*1890 Research						

*1890 Research will report separately

Total Formula Funds Expended by National Goal

Multi-State Funds Expended by National Goal

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
1862 Extension	$608,968	$132,680	$294,351	$100,965	$348,066	$1,485,031
1862 Research	N/A	N/A	N/A	N/A	N/A	N/A

1862 Integrated Extension/Research Expended by National Goal

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
1862 Extension	$867,356	$262,024	$14,152	$100,935	$111,484	$1,355,950
1862 Research	$255,150	$4,143	$602,280	$0	$23,008	$884,581

1862 Extension Matching Funds

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
Federal Smith-Lever	$3,662,864	$301,354	$253,781	$642,355	$1,555,355	$6,415,709
State	$18,742,161	$1,644,049	$1,315,239	$3,288,098	$7,891,438	$32,880,985
County	$18,884,718	$1,656,554	$1,325,243	$2,313,108	$8,951,462	$33,131,085

1862 Research Matching Funds

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
State	$85,799,148	$12,456,453	$2,796,174	$0	$30,149,136	$131,200,910

1890 State Matching Funds

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
State	$521,046	$170,186	$99,678	$87,486	$225,746	$1,104,142

FTEs and Sys

	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Total
1862 Extension (FTEs)	24	1	2	2	3	32
1862 Research (Sys)	44	3	1	15	4	67

A. FLORIDA STAKEHOLDER INPUT PROCESS

Florida's Plan for Stakeholder Input Requirements for Recipients of Agricultural Research, Education, and Extension Formula Funds

Stakeholders
Guidelines
For
The University of Florida and Florida A&M University

Actions taken to encourage stakeholder input:
The University of Florida and Florida A&M University have established a process for "receiving input from persons who conduct or use agriculture research, extension, or education." These stakeholder processes include, but are not limited to, the following:

- UF/IFAS Extension 4 year Strategic Plan (completed in March 2004)
- FAMU/CESTA long-term strategic Plan (completed in 2004)
- Florida County Extension Advisory Committees
- Florida Ag Council, Inc.
- Departmental Advisory Committee and the Research and Education Center Advisory Committee
- Commodity Advisory Committees
- Florida Agricultural Industry Review
- Industry Ag Summits
- Meet with School of Forest Resources (SFRC) External Advisory Board 2x per year (composed of 30 industry, agency, NGO and private consultants)
- Serve on the advisory boards of Florida Forestry Association and Division of Forestry
- Maintain an active dialogue with forestry and natural resource alumni
- Prepare and regularly revise a Strategic Plan for the School of Forest Resources including a survey of more than 300 stakeholders

Brief description and process used to identify individuals and collect input

UF/IFAS Extension's strategic, long range planning process for FY 2004-2008 was a year long endeavor to evaluate, review and determine future direction to better carry out Extension's mission in support of Florida food, agricultural, natural and human resources. This initial process was accomplished through a grass roots approach in which advisory groups, representatives for the underrepresented and underserved populations, local government officials, commodity interests (both private and public), and the general citizenry were invited to attend local meetings in all 67 counties. Participants were asked to provide suggestions and make needs assessments. These county assessments were presented to Extension administrators at regional meetings conducted around the state.

Scientists and experts at UF/IFAS who research trends and major determinants of change in Florida's agricultural, human and natural resource subsectors were also asked for input into the

process as well as some state and national commodity organizations. A total of 800 needs were identified state-wide (some were duplications and helped to identify trends). Information was then compiled and analyzed. Results were shared with teaching and research faculty as part of a close collaboration among the three units as a resource for determining UF/IFAS research and extension imperatives for the future including immediate, short-term, and long term critical need areas.

Based on stakeholder input and an external review (Appendix F) held in February 2003, seven state goals (Appendix G)(six of which are included in the AREERA) were identified and announced by interim Extension Dean, Larry Arrington. The state goals are:

1. To Enhance and Maintain Agriculture.
2. To Maintain and Enhance Florida's Environment
3. To Develop Responsible and Productive Youth Through 4-H and Other Youth Programs
4. To Create and Maintain Florida Friendly Landscapes: The Smart Way to Grow
5. To Assist Individuals and Families Achieve Economic Well-Being and Life Quality
6. To Achieve Economic Prosperity and Community Vitality in Florida's Urban and Rural Communities
7. To Promote Professional Development Activities Designed to Enhance Organizational Efficiency and Effectiveness

For additional information on the Florida long range planning process and the Goal and Focus reorganizational structure go to http://pdec.ifas.ufl.edu.

FAMU/CESTA initiated a long-term strategic planning project. Over 125 internal and external stakeholders provided their input through structured questionnaires. The survey revealed FAMU is on target in their 1890 programs and suggested several new areas that need attention:

1. Biomass/Biofuels
2. Nanotechnology in Agriculture
3. Obesity
4. Product development

These will be reported in AREERA as action teams under the state-wide focus areas presently under development by Florida Extension (1862/1890)

The Florida County Extension Advisory Committees provides direction for Extension education programs for both the University of Florida and Florida A &M University on a continual basis. Active advisory committees exist in all of Florida's 67 counties, usually at both the overall and program area levels. The committees serve as a vehicle for local citizens to participate in, influence and provide support to the planning, implementation and evaluation of Extension education programs, and the accountability for those programs. The composition of the committees consists primarily of positional and reputational leaders representing the areas of agriculture, agribusiness, natural resources, family and consumer sciences, 4-H youth, and community development. Special attention is given to the representatives of the target populations, including race and socio-economic level. Extension advisory committees are strongly believed to result in increased accuracy in identification of clientele-perceived needs, more effective decisions on program priorities and methods, and more rapid and accurate communication of program efforts and clientele feedback on both program impact and need for

education and research. This committee format serves as a vehicle for local residents to participate in, influence and provide support to the planning and implementation of the Extension Education Programs.

Departmental Advisory Committee and the Research and Education Center Advisory Committee are developed in the same manner and have the same function as the county Extension Advisory committees.

Florida Ag Council, Inc. is a self-nominating body comprised of over 100 organizations. A 12-member board directs it. Its purpose is to increase the accuracy in the identification of clientele-perceived needs and to assist in the decision making process relating to research, teaching and Extension priorities.

Commodity Advisory Committees are various advisory groups with special emphasis on important program areas such as Florida A&M Universities program FL 261 Small Animal and Small-scale Farm Profitability and Sustainability in Florida- 1890. Of primary importance in identifying critical need areas is their Goat Program Advisory Council. Although commodity oriented, this type of advisory committee is still developed and functions using the same standards as the county advisory committees.

Florida Agricultural Industry Review(FAIR) a report on the University of Florida Institute of Food and Agricultural Sciences to the Florida Farm Bureau Federation . The purpose of this report was to provide input from agricultural industry to the University of Florida, Institute of Food and Agricultural Sciences (IFAS) and state policy makers on the structure and future of UF/IFAS. The recommendations and timelines given in this report center primarily in the agricultural area and was designed "to move IFAS into the top five agriculturally focused land grant institutions nationally.

Ag Industry Summits Report is presently being prepared from four industry led meetings held across the state (2004) which identified AG industry needs for IFAS research, teaching and extension. The final report is presently being compiled for release.

B. PEER AND MERIT REVIEW GUIDELINES

Scientific Peer and Merit Review Guidelines for
Research Project and Extension Program Proposals at
The University Of Florida and Florida A&M University

Intention: This document sets out performance standards and operational guidelines for the Florida Land Grant Universities. 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: *Scientific Peer Review* of an individual research project is defined as the evaluation of the conceptual and technical soundness of the intended activity by individuals qualified by their status in the same discipline, or closely related field to judge the worthiness of the proposal.

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 research projects and extension programs (focus areas) that are to be sanctioned and funded as part of the federal-state partnership in agriculture research and extension. These standards and guidelines do not apply to proposed research projects and extension programs that are subject to peer review by competitive grant agencies, peer review of extension and research publications. Thus, all research projects and extension programs sponsored by Florida Land Grant Colleges will have been formally merit and peer reviewed, before the expenditure of any federal funds.

Process: Prior to the initiation of any research project or extension program 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, the administrative advisor) will call for a peer review of the proposed research or extension 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 focus goal team made up of focus team leaders will read and provide written comments to the appropriate administrator on proposed programs (focus areas)..

Terms of Reference: 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 or extension program, the validity of the approach, and the likelihood for completing the stated objectives. Other equally important comments will include relevance to the state's priorities, the degree of integration between extension and research (as appropriate), responsiveness to stakeholders identified critical need areas, and the accuracy of any claims for multi-disciplinary, multi-institutional and multi-state collaboration.

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

Appointment of Reviewers: 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. 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.

Research and Extension projects and programs not covered: Projects and 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.

Performance Standards: Peer review of proposed projects, and merit review of Extension programs is expected to provide the following performance outcomes:

Research

- Increase the quality of science funded by the federal-state partnership
- better assure relevance to institutional priorities and mission
- provide more responsiveness to stakeholder needs including the underserved and under-represented populations,
- and identify more opportunities to partner with other states, regions, federal research agencies, and Extension counterparts.

Extension

- Provide more responsiveness to stakeholder (including the underserved and under-represented) identified critical need issues
- Better assure relevance to institutional priorities and mission
- Increase the quality of programs, events and activities funded by the federal-state partnership, and
- Identify more opportunities to partner with other institutions, regions, states, and research counterparts

Performance outcomes from Merit and Peer Review

Performance outcomes from the merit reviews will be monitored by the Programs Development and Evaluation Center (PDEC) through the annual accountability process. Scientific peer reviews will be monitored by the Research Administration Office.

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

I. SAMPLE EVALUATION FORM FOR MERIT REVIEW

Extension Merit Review of Florida Goal Teams
Goal Number:
Goal Title:
Goal Leaders:
Focus Team Title:
Reviewer(s): _____Accept _____Accept with minor revision(s) (Explain required revisions) _____Accept with major revision(s)(Explain required revisions) _____Reject (Explain your reasons for rejection).

For each statement below, please indicate your rating of how well the following statements have been written by the Focus Team (check one column for each statement)

Likert Scale

The Situational Statement and Rationale…	Not Applicable (N/A) 0	Very Poorly Written 1	Below average 2	Average 3	Above Average 4	Very Well Written 5
Articulates the importance to agriculture, human and natural resources, rural and urban life, and/or consumer concerns and science						
Relates to current priorities as identified by Florida stakeholders (long range planning, advisory committees, surveys etc.)						

Describes the situation						
Demonstrates the need for integration with research (and Teaching as appropriate)						
Explains the benefits of a multi-state, multi-institutional approach (if appropriate)						

Outcomes: The Focus Teams…	Not Applicable (N/A) 0	Very Poorly Written 1	Below average 2	Average 3	Above Average 4	Very Well Written 5
State clear, concise, measurable and focused clientele outcomes						
Relate outcomes to situation statements						

Audience: The Focus Teams…	Not Applicable (N/A) 0	Very Poorly Written 1	Below average 2	Average 3	Above Average 4	Very Well Written 5
Clearly identify the audience(s) that need(s) to be targeted						
Include underserved and underrepresented individuals and population segments						

Educational Activities and Impacts: The Focus Teams…	Not Applicable (N/A) 0	Very Poorly Written 1	Below average 2	Average 3	Above Average 4	Very Well Written 5
Lists appropriate methods to reasonably expect attainment of the outcome						
Describes potential impacts for each focus area						

Evaluation: The Focus Team…	Not Applicable (N/A) 0	Very Poorly Written 1	Below average 2	Average 3	Above Average 4	Very Well Written 5

Clearly states its tools and approaches to be used (e.g., pre- and post- tests, survey,, etc.) and the expected results (e.g., increase knowledge, modified behavior, impact, etc.)						
Includes appropriate impact statements						

II. SAMPLE EVALUATION FORM FOR PEER REVIEW

Dr Mark R Mclellan
FAES\CRIS Project Review Chair

December 12, 2004

Dear ___

Thank you for agreeing to review the enclosed FAES/CRIS Project proposal by: _____

Your complete and thorough review of this proposal is of fundamental importance to the research efforts of IFAS and insures the continuation of the high-quality IFAS statewide research program.

Please evaluate the proposal, considering the following points:

1) Does the project outline follow the format delineated in IMM 6C1-6.120-3 "IFAS: Research Planning" (excerpt enclosed; document located at: http://research.ifas.ufl.edu/projects/prepinstructions.html)

2) Is the work relevant to critical emerging issues in agriculture, rural life, consumers, and science?

3) Does the proposal clearly state the anticipated outcomes of the work, and do these outcomes benefit the scientific, extension, and educational components of IFAS?

4) Do the experimental design and methodology clearly address the stated objectives of the study?

5) In your view, does the project show evidence of high scientific quality? Does this project duplicate research being done through other projects?

6) Does the proposal provide opportunities for collaborative interactions with other individuals or units to maximize efforts and resources?

Please make your comments on a separate sheet, and provide an over-all summary of the primary changes you believe should be made before final approval. You may also mark appropriate changes in the body of the proposal. If you choose, you may sign your name to the review or remain anonymous.

Please return the copy of the proposal and an original and 2 copies of your written review and comments to me. Again, I would appreciate the return of your review by: **January 16, 2004.** Thank you for your assistance in this important matter.

Sincerely,

Mark R Mclellan

! Office of the Dean for Research !P. O. Box 110200 ! Gainesville, FL 32611
! Phone: (352) 392-1784 ! FAX: (325) 392-4965 ! e-mail: wfbrown@mail.ifas.ufl.edu

Excerpt From "Instructions For The Preparation Of Project Statements"
UF/IFAS Internal Management Memorandum 6C1_6.120_3

The Project Statement should contain the following components:

I. Objectives: A clear, complete and logically arranged statement(s) of the specific objectives of the research to be conducted. The objective(s) should adequately cover all the work outlined in the procedures.

II. Justification: A short statement of the problem giving its importance in science, agriculture, environment, rural life and consumer concerns. The following questions should be addressed:

A. What is the importance of the problem to agriculture and natural resources and urban or rural life of the state or region? This should insofar as possible be answered in terms of acres, tons, people, cattle, plants, dollars, or other specific items. When possible, mention the dollar value of the industry. References in support of these items should be cited.

B. What are the benefits which may result from the proposed research? Express this is terms of new varieties, reduced labor costs, increased production, larger net returns, or other appropriate specific results.

C. What will be the dollar value of losses caused by the problem? Acres, tons, or other measures may be used if a dollar evaluation cannot be made. The above information is important whether the research in question is applied or basic in nature. The question may be more difficult to answer for basic research, but the importance of the problem and the reasons for undertaking the work should be clearly pointed out in either case.

III. Related Current and Previous Work

1. What has been done? (Literature Review) Should be a brief summary covering pertinent research on the problem. References should be included indicating what was found and its significance.

2. What needs to be done? (Hypothesis, rationale) Should be a summary statement placing emphasis on the research currently needed in this area of work. This paragraph should also contain an outlook statement, i.e., the PIs appraisal of what may be accomplished by this project.

IV. Procedures: A statement of the essential working plans and methods to be used in attaining each of the stated objectives. There should be a numbered statement of procedures to correspond with each numbered objective and follow the same order. Whenever possible it should be presented in enough detail to serve as a guide for project PIs and to enable the reviewer and other readers to obtain a clear concept of the research to be done. For each objective, one or more experiments, or examples of the types of experiments) should be described that will seek to fulfill that objective.

Literature Cited: Literature references within the text should be given by author and year. Full citation of these references should be included in a “Literature Cited” section at the end of the Statement with the format: author(s), year, title, publication, volume, and pages.

III. SUMMARY FOR 2005

The Merit review process is in the process of being redeveloped during the 2005-2006 fiscal year. Changes will provide more measurable outcomes of team involvement in program development. In particular measurements will include a method of self-evaluation for faculty that will provide specific in-service based on needs and allow faculty to use results as part of their professional development improvement portfolio.

The objective of UF/IFAS and FAMU/CESTA Extension is to provide positive feedback for faculty to improve team process used in integrated programs and projects that lead to effective and efficient outcomes. This will in turn increase the value of the land-grant colleges to the state of Florida and the residents and the guests who visit the state.

The first part of this review based on 2005 information will be on file in June 2006 for review in the Program Development and Evaluation center at the University of Florida.

C. EXTENSION GOALS AND FOCUS AREAS

UF/IFAS Extension
Statewide Goals and Focus Areas for 2004-2007

G[i]1 To Enhance and Maintain Agricultural and Food Systems

G1-F[ii]1 Agricultural Profitability and the Sustainable Use of Environmental Resources
G1-F2 Awareness of Agriculture's Importance to an Economy That Ranges From Local to Global
G1-F3 Processing, Distribution, Safety and Security of Food Systems
G1-F4 Plant, Animal, and Human Protection
G1-F5 Safety for Agricultural Operations and Equipment

G2 To Maintain and Enhance Florida's Environment

G2-F1 Water Resources
G2-F2 Conservation and Sustainable Use of Freshwater and Terrestrial Natural Resources and Ecosystems
G2-F3 Environmental Education
G2-F4 Conservation and Sustainable Use of Coastal and Marine Natural Resources and Ecosystems

G3 To Develop Responsible and Productive Youth Through 4-H and Other Youth Programs

G3-F1 Life Skills Developed In Youth Through Subject Matter Experiences
G3-F2 Organizational Strategies and Learning Environments to Support Youth Programs
G3-F3 Volunteer Development and Systems to Support Youth

G4 To Create and Maintain Florida friendly Landscapes: The Smart Way to Grow

G4-F1 Commercial Horticulture/Urban Forestry Services
G4-F2 Residential Landscapes
G4-F3 Florida Yards and Neighborhoods (FYN)
G5 To Assist Individuals and Families to Achieve Economic Well-Being and Life Quality

G5-F1 Personal and Family Well-Being
G5-F2 Financial Management and Economic Well-Being
G5-F3 Nutrition, Food Safety, and Health
G5-F4 Housing and Environment
G5-F5 Nonprofit Organizations, Leadership and Volunteer Development

G6 Healthy Communities

G6-F1 Addressing the Urban/Rural Interface
G6-F2 Broad-Based Citizen Participation and Active Communities
G6-F3 Economic Diversity
G6-F4 Community Preparedness

G7 To Promote Professional Development Activities Designed to Enhance Organizational Efficiency and Effectiveness

G7-F1 Program Development, Implementation and Evaluation
G7-F2 Faculty Orientation and Training
G7-F3 Effective Communication and Technology Use
G7-F4 Personal and Organizational Health
G7-F5 Administration and Leadership

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[i] Goal
[ii] Focus Area