

South Carolina
Cooperative Extension System

FY 2001
ANNUAL REPORT OF
ACCOMPLISHMENTS

Submitted to CSREES-USDA

March, 2002

CLEMSON UNIVERSITY
COOPERATIVE EXTENSION SERVICE
CLEMSON, SOUTH CAROLINA

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A. PLANNED PROGRAMS

National Goals

Goal 1: An agricultural system that is highly competitive in the global economy.

Overview:

Changes in government regulations and the economic environment have increased the risks of farming in South Carolina. The forces of change affecting agriculture in general are magnified in their potential impact on the state's thousands of small and minority farms. (Nearly 90 percent of the total farms in South Carolina is classified as small farms.) Couple these changes with the advancements being made in agricultural technology, and it is understandable why a framework of educational programs were established to enable the agricultural system of South Carolina to become more competitive in the global economy. Four educational initiatives serve as the framework for implementing GPRA Goal 1. These four initiatives are:

- Business, Financial and Risk Management Systems for Agricultural Firms
- Retention of Small/Minority Farms
- Application of New Technology for Profitable Animal and Plant Systems
- Safe Home-Based Plant Health Management

Under each of these initiatives, projects were identified which serve as the basis for program planning and development.

For the Business, Financial and Risk Management Systems for Agricultural Firms initiative, three projects were utilized: Agricultural Market Risk Management; Economic Analysis of Enterprises and Technologies; and Business and Financial Management Systems (BFMS). The educational programs that were developed as part of these projects were directed at teaching management skills to ensure long-term profitability and stability of farm businesses. These programs included: 1) business planning, creative problem solving, assessing business combinations and technologies for profitability while managing market and financial risks and maintaining the integrity of the environment; 2) economic analysis of enterprises and technologies; 3) business and financial management systems; and 4) the "Executive Farmer" program which is closely tied to the business and financial management systems efforts.

The Retention of Small/Minority Farms initiative contains four project areas: Marketing; Production Education; Planning/Enterprise Selection; and Farmland Retention. The primary focus of this initiative is to assure small farm sustainability through increased farm income and enhanced quality of life. The Product Education project allows small farmers to learn improved sustainable production practices, business management skills, and appropriate small-scale technologies. The Planning/Enterprise Selection project teaches small farm

families how to evaluate resources and goals. In addition, they learn about opportunities and constraints of various farming techniques. The Farmland Retention project provides educational opportunities in estate planning and regulatory/tax issues.

The Application of New Technology for Profitable Animal and Plant Systems initiative includes five projects: Technology Discovery Program; Bioenhancement Technologies; Information Technology; Introduction of New Production/Processing Mechanical Systems; and Farm Safety and Health. The educational programs developed within these project areas focus on: 1) the synthesis of precision agricultural technologies; 2) the understanding and utilization of bio-enhanced agricultural technology; and 3) the utilization of distance education and computer based educational systems.

The Safe Home-Based Plant Health Management initiative is comprised of three project teams to deliver programs and information on plant health management: Horticultural Professional Education; Master Gardener Education; and Consumer Education. The key program components in this initiative is in training horticulture professionals and Master Gardeners to disseminate plant health management information and operate home health horticulture information centers to disseminate plant health information directly to consumers. The goal is to utilize the horticultural professionals and the Master Gardeners to educate consumers and youth on plant identification, selection, culture, pest identification, integrated pest management and poisonous plants in the home environment.

There was a total of 9,419.0 days or 41.0 FTE reported in areas that are classified under Goal 1. The total number of contacts reported in this goal was 113,639. The breakdown of these contacts is as follows: 55,721 white males, 42,640 white females, 8,483 black males, 5,682 black females, 552 classified as other males, and 561 classified as other females. From this group, a total of 2,786 were classified as limited resource. Accomplishment that were reported to the Clemson University Information Management System show 2,728 total programs and activities conducted in projects that are classified under Goal 1. There were a total of 44,341 participants who completed these educational programs. Of those completing the programs, 37,014 reported increasing their knowledge as a result of their participation. Of those participants who reported increasing knowledge, 16,049 reported that they adopted or increased the use of recommended practices as a result of the programs. The total state level allocations for initiative teams classified under Goal 1 was \$66,500.

Key Theme – Small Farm Viability

- a. The major initiatives of this important program area include marketing, production education, planning/enterprise selection and small/minority retention effort. The overall goal of all initiatives is sustainability of small/minority farms and families through increasing farm income and enhancing quality of life. South Carolina has more than 90 percent of all farms classified as “small farms”. These type of farming entities have faced a changing, complex but also more difficult economic environment than other types of farms.

- b. Impact --

Extension, in conjunction with the Business School and Center for Cooperatives at SC State University conducted two statewide meetings for limited resource farmers. These programs concentrated on direct marketing and risk management.

One inservice training for 22 agents (including SC State University) was conducted. This training was based on planning/enterprise selection for small, limited resource and part-time farmers. The faculty included experts from three states. Each agent was provided with a comprehensive set of teaching material. They also developed plans for their own educational activities in this area and reported the use of this in at least one case each.

Based primarily on small farm requests, three cooperative publications were developed. These subjects included what is a co-op, new generation cooperatives and steps to developing a co-op. These publications were the basis for two small farm meetings of 35 producers and one section to a regional small farm meeting (24 farmers of which all were limited resource).

One county extension office provided leadership and effort in the completion of a very successful farmers market. Of the farmers participating, 62 percent were minority and 36 percent were limited resource. This has also provided educational opportunities in extension programming in marketing and production.

One intensive multi-county marketing program for beef cattle was conducted. There were 130 producers of which nearly 100 were limited resource, who completed this program. At least one-half of these producers changed or incorporated planning, production or financial analysis as a result of this activity.

A new alternative enterprise was established in one county. After research and discussion by the farmers, 21 small farmers completed a beginning beekeeping course and all are now starting to incorporate this enterprise on their farm.

A major activity which focused on small/minority farms was in the area of production education. Educational meetings/demonstrations topics included soil testing, liming for

crop production, risk management, growing specific produce. The number of producers completing non-formal educational programs were almost 1,900 with over 1,700 of the participants reporting an increase in knowledge; in addition, over 1,000 adopted or increased their use of these production practices.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Risk Management

- a. Response to educational demands in the area of risk management from South Carolina agribusinesses were to be through 1) provision of current situation, outlook and management strategy information to the industry; 2) provision of increased training for front-line agents and state specialists; 3) provision of educational programs on market risk management tools available for use by primary producers and agribusinesses; and 4) development, distribution and training on microcomputer-based market risk management decision aids.
- b. Impact --
 - n Situation, outlook and management strategy information to SC Ag. Industry developed and delivery of market management information through the SC Agricultural Outlook Conference (SC Agricultural Expo) Myrtle Beach, SC January 2001. Materials were provided to County Ag Agents for county or cluster commodity programs in the region.
 - n Training for county agents and state specialists: A two-day inservice training for agricultural agents on market risk management techniques and loan deficiency payments. Agents were exposed to advancements in market risk management including developed software for decision analysis developed for firms facing agricultural market risk
 - n Educational programs on risk management tools and products available for use by primary producers and agribusinesses: Eight multi-state workshops were offered on tactical market risk management procedures with a focus on the current agricultural environment.
 - n Educational programs on risk management tools and products available for use by primary producers and agribusiness: A regional (VA, NC, SC, GA, and FL), in-depth training (3-4 days) on market risk management was developed and offered to agricultural producers, lenders and other agribusinesses under the auspices of the *Executive Marketing School*. The intent was to offer in-depth training to producers. This project involved significant planning, materials development, promotion, and utilization of the SE Region's Agricultural Economists.
 - n Development and distribution of market risk management decision aids and data access: Spreadsheet-based software that reviews the existing marketing alternatives and

calculates the potential performance of the strategies under varying market scenarios was developed. Further, a module on the probability of ex-ante price change derived from current market conditions was incorporated

- n A total of 142 programs and activities were conducted in the area of risk management with 3,281 participants. Of those participants, 2,804 indicated an increase in knowledge and 2,423 adopted or increased the use of recommended practices.
- a. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State and Multistate

Key Theme – Agricultural Profitability

- a. Production decisions are no longer based mainly on government commodity program guidelines. Rather they are based on comparative profit potential of feasible alternative enterprises. Additionally, new production technologies are being introduced at a rapid rate. There is increased demand to evaluate new technologies. Extension faculty will be called upon to educate farm managers and others on financial risks – this begins with knowledge of basic enterprise budgeting. From this knowledge base, agribusinesses will be in an improved position to make better production decisions. This, in turn should increase long-term profitability and sustainability.
- b. Impact --
 - v Provision of current enterprise analysis information to SC Ag Industry: Approximately 160 enterprise budgets were developed and distributed including on the World Wide Web departmental site. These materials were provided to County Ag Agents for county or cluster commodity programs.
 - n Training for county agents and state specialists: An inservice training for agricultural agents on enterprise analysis decision aids and techniques was held. Agents were exposed to advancements in enterprise budgeting tools including developed budgets for decision analysis for firms facing agricultural risk.
 - n Educational programs on risk management tools and products available for use by primary producers and agribusinesses: County or Cluster workshops were offered on enterprise analysis procedures and issues. Computer-based breakeven spreadsheets were developed and distributed.
 - n A total of 34 programs and activities were conducted which dealt with the area of economic analysis of enterprises and technologies with 579 participants. Of those participants, 437 indicated an increase in knowledge and 235 adopted or increased the use of recommended practices.
- c. Source of Federal Funds – Smith Lever 3b&c

- d. Scope of Impact – State

Key Theme – Agricultural Profitability

- a. The farm business environment demands greater entrepreneurial leadership abilities of farm businessmen. The change in government programs, rapid change in technology, the trend toward larger and more sophisticated farm businesses and the Mega trend toward industrialization has made it critical that farm managers learn how to develop a successful management system for their farm. It is also critical for Extension to develop these “management/ leadership/entrepreneurial” programs if we are to continue to be viewed by commercial farmers as an effective educational and informational provider. Extension has historically and is currently putting the huge majority of its resources into production-oriented programs. Farmers have found that high production does not make a successful business and continually express their need for Business Management and marketing programs
- b. Impact --
 - v Executive Farmer Program - This program focuses on how to develop a systematic approach to problem solving and strategic planning. The end product is an Action Business Plan developed with the use of the farm firm’s own financial information. The emphasis is on analyzing the business records; setting business goals and developing an action plan that participants can take home and implement. Two workshops were conducted in FY 00-01.
 - n A total of 99 programs and activities were conducted which dealt with the area of business and financial management systems with 292 participants. Of those participants, 276 indicated an increase in knowledge and 238 adopted or increased the use of recommended practices.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Application of New Technology

- a. Precision farming is revolutionizing the agricultural industry. The technological advances have the potential to significantly alter the structure of agriculture in South Carolina. On farm demonstrations were planned and implemented to study remote sensing applications in

Agriculture. A joint Research/Extension initiative to apply remote sensing and precision agriculture technologies to the reduction in total application of soil-applied nematicides was begun. Data collected is being analyzed for appropriate communication to the farming audience in South Carolina.

Field demonstrations for new swine waste treatment technology including solid/liquid separation systems were completed. This included demonstration of the project data analysis at the demonstration site in Dillon, SC.

Distance learning techniques were utilized to design, implement, and evaluate multistate training on soil science and fertility management. Results of this effort were shared at Extension conferences in South Carolina and at an International Technology Conference in Montpellier, France.

Biotechnology workshops were conducted as a result of in-service training conducted during the year. Cotton focused grower workshops investigating biotech issues were conducted. Newspaper article was printed on biotech issues in agriculture and brochures were developed and distributed at county level program meetings.

Information technology utilization for analysis and communication of drought information to SC audiences. Irrigation training sessions developed and delivered. County and state web page design and management

Introduction of New Production/Processing Mechanical Systems Program highlights include alternative Farm Smart sponsorship, alternative tillage demonstrations, Partitioned Aquacultural System (PAS) was demonstrated to state, regional, and international delegations of potential users.

Farm Safety & Health program highlights include: completion joint program between Clemson University, SC State University, and University of Kentucky for farm safety issues and to develop future collaborative efforts in ROPS programs; development and utilization of a tractor rollover demonstration kit; publication of internet based farm safety newsletter; active participation in Progressive Farmer Farm Safety Day Camps; continued interaction with the farm safety & health advisory board; minority farmer focus group participant with SC State University on safety issues; service on a Center for Disease Control Review Panel, water safety demonstrations, prevention of hearing loss workshops, lawn safety training for youth, SMV and emergency lighting focused programs, and high school targeted farm and outdoor safety educational events..

b. Impact –

A total of 298 activities and programs were conducted with 4133 people participating. Of those attending 2802 reported an increase in knowledge with 1901 people reporting

adoption of new practices. In addition the Farm Safety & Health project had 1353 youth participants. A total of 4.46 FTE was devoted to this area.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – Multistate

Key Theme – “Other” (Plant Health)

- a. The plant health area focused on three major projects during FY 2001. These projects were Horticulture Service Professional Education, Master Gardener Education and Impact, and Consumer Education.

For the project area of Horticulture Service Professional Education, a training titled “Professional Turfgrass School” was offered at Myrtle Beach, Columbia, and Greenville, SC. Five county agents were allowed to attend free of charge.

This project also assisted with technical production costs for the Commercial Ornamental and Turfgrass Shortcourse (COTS). The COTS program is designed to prepare individuals to take the written portion of the South Carolina Nursery & Landscape Association Certified Nursery Professional exam. This program was offered via satellite to several locations around the state.

The Master Gardener Education and Impact project supported the SC State Master Gardener Conference with funding for an outside speaker. The conference was held May 16-18, 2001 in Clemson with 119 attendees.

State level training programs in the area of Consumer Education included: “Woody Plant Identification Techniques” on 10/4-10/6/00 with 10 participants, “Stupid Tree Tricks” on 10/18/00 with 21 participants, “Building with Trees” on 10/25/00 with 14 participants, “Weed Management in Ornamental Landscape Plantings” with 30 participants, “Nuisance Wildlife Management” with 86 participants (72 were external clientele), “ID and Culture of Selected Woody Ornamentals” on 2/22/01 with 62 participants (47 were external clientele), and “Residential Irrigation I” on 4/17/01 with 12 attendees.

- b. Impacts –
For the project area of Horticulture Service Professional Education, a total of 308 programs (76 of which were joint educational efforts with other agencies) were delivered to 4,046 participants with 2,425 participants reporting increased knowledge and 850 adopting new practices. There were 75 horticulture service providers utilizing 4 new or ongoing demonstration sites. Fifty-three newsletters or trade journal articles were

prepared. Personal contacts through telephone, office, and site visits totaled 1,867. The activities and programs of this project were accomplished through the input of 3.6 FTE.

The Master Gardener Education and Impact project included the delivery of 508 programs dealing with plant health issues with 6,582 participants. Participants in these programs reporting an increase in knowledge were 5,023 with 2,873 adopting or increasing use of plant health management practices. This year, 1,666 residents were trained to become Master Gardeners. The Master Gardeners contacted 32,475 individuals and contributed 31,217 hours of service. The Master Gardeners also made 240 mass media contributions. Master gardener volunteers contributed 87,788 miles of travel. The activities and programs of this project were accomplished through the input of 4.6 FTE.

For the project of Consumer Education, 1,246 activities or programs were conducted with 22,966 participants (20,224 reporting increased knowledge and 5,547 reporting practice adoption). An additional 22 programs were conducted specifically for youth. There were 916 mass media activities conducted. Visitors to plant health demonstration sites included 34,639 consumers and 651 youth. There were 33,784 personal contacts through telephone, office, and site visits and 82,061 consumers received plant health management information through the Urban Horticulture Center at the Riverbanks Zoo, the Home & Garden Information Center, and the PAWS Horticulture Line. The activities and programs of this project were accomplished through the input of 16.6 FTE.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Goal 2: A safe and secure food and fiber system.

Overview:

Consumers are concerned about the safety of their food. However, only a limited number of consumers understand the process involved in safe handling and distribution of food. Many commercial food handlers also need the technical assistance to enhance food safety and quality for the food industry. The primary focus for this goal was to provide effective educational programs and trainings to South Carolina citizens and industries which has led to increased knowledge and behavior toward safe food handling practices. The one initiative under this goal is Food Quality and Safety: Commercial and Consumer Emphasis. This initiative has five project areas: 1) Increasing the Quality and Safety of the Food Supply Through the Education of Food Handlers; 2) Master Volunteer - Food Safety; 3) Teaching Nutrition, Utilization of Food Resources, and Food Safety Through the Media; 4) Responding to Consumer Food Handling Concerns and Questions; and 5) Commercial Food Handling, Processing, Preservation, Packaging for Safety, Quality, Economic Development.

Safe handling of food was taught to handlers in the food service industry and the general public. Program instructors were certified to train food handlers in safe food handling techniques. Extension Agents also received training on safe food storage, handling and preservation. This enabled them to provide clientele with the appropriate information which improved their understanding of risks and responsibilities in relation to food and health. Attention was also given to providing consumers with scientifically based, reasonable food safety information through the media.

There was a total of 2,549.0 days or 11.1 FTE reported in areas that are classified under Goal 2. The total number of contacts reported in this goal was 19,678. The breakdown of these contacts are as follows: 5,155 white males, 9,338 white females, 1,187 black males, 3,047 black females, 652 classified as other males, and 299 classified as other females. From this group, a total of 1,265 were classified as limited resource. Accomplishment that were reported to the Clemson University Information Management System show 1,013 total programs and activities conducted in projects that are classified under Goal 2. There were a total of 8,708 participants who completed these educational programs. Of those completing the programs, 5,760 reported increasing their knowledge as a result of their participation. Of those participants who reported increasing knowledge, 3,829 reported that they adopted or increased the use of recommended practices as a result of the programs. The total state level allocations for the initiative team classified under Goal 2 was \$35,000.

Key Theme – Food Safety

- a. There were 23 Master Food Preserver programs offered during the year and 196 educational programs for food handlers offered across the state. Media continues to be an important way to reach consumers with food safety and nutrition information. Counties have a wide variety of media opportunities including radio spots, development of press packets on specific nutrition subjects, new articles, and TV programs.

- b. Impact --

The Master Food Preserver programs trained 65 volunteers in the basics of food safety and food preservation who contributed 59 hours reaching 80 consumers with accurate, timely food preservation information.

There were 2,804 consumers who completed home food safety programs offered and 5,399 who received information from a phone call to the Extension office.

Counties reported the distribution of 75 press kits, 5,642 column inches appearing in the printed media, 318 minutes of television air time, and 843 minutes of radio air time in the areas of food safety and nutrition.

- c. Source of Federal Funds – Smith Lever 3b&c and generated

- d. Scope of Impact – State

Key Theme – Food Handling

- a. Counties have made great progress in reaching food service employees with ServSafe employee training. This is a 6- or 10-hour training on how to safely handle food in a food service operation.

- b. Impact --

A total of 196 programs were conducted reaching 2,406 food handlers. A more indepth version of ServSafe was offered to managers and 121 food service managers passed a national exam and were certified. Counties report the development of 59 partnerships while teaching ServSafe and \$4,230 was generated in program support.

- c. Source of Federal Funds – Smith Lever 3b&c and generated

- d. Scope of Impact – State

Key Theme – Food Quality

- a. Interest continues to be high for information on a home-based food processing business.
Contact with food processing industry was done through workshops, industry meetings, and individual contacts with growers, shipper, or processors.
- b. Impact –
A total of 191 educational programs were conducted reaching 2,441 commercial food processors. Of this total number, 2,129 report adopting or increasing uses of the recommended safety practices. Commercial food processing contacts or sites totaling 3,165 were advised of regulatory changes. There were 233 educational programs conducted on the processing or packaging of a new or value-added food product.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Goal 3: A healthy, well-nourished population.

Overview:

Americans are lacking knowledge in their basic nutrient needs and the skills needed in meal planning and food selection to meet these nutrient needs. The relationship of the risk of contracting certain chronic diseases, such as coronary heart disease, stroke, diabetes, cancer and poor nutritional status is well documented. South Carolina has dismal health statistics. Heart disease, cancer, and stroke, account for nearly two-thirds of the deaths in the state. The South Carolina Department of Health has stated that 80 percent of all cancers, 50 percent of heart disease deaths, and 50 percent of all stroke deaths are due to lifestyle habits. Old eating and food preparation methods are hard to change. The initiative team determined that educational programs for youth and those individuals who affected the eating patterns of youth are essential if the risk factors for chronic disease are to be avoided and if the South Carolina health statistics are to improve.

While only one initiative was developed under this goal, there are a total of eight projects. The initiative is Human Nutrition and the Utilization of Food Resources with Emphasis on Food Security. The eight projects that comprise this initiative are: 1) Teaching Nutrition and the Utilization of Food Resources to Youth, 2) Addressing the Food Security Issue Through the Global Food Web Program, 3) Teaching Nutrition and the Utilization of Food Resources to Multipliers, 4) Consumer Nutrition Education Programs Emphasizing Using Food Resources and Skill Development, 5) Emphasizing Agriculture Commodities Through Nutrition Education Programs, 6) Teaching Nutrition, Utilization of Food Resources, and Food Safety Through the Media, 7) Nutrition and Healthy Lifestyle Education for Limited Resource Youth Through LINC, and 8) Nutrition and Healthy Lifestyle Education for Limited Resource Adults Through LINC.

As previously indicated, the major focus in South Carolina for Goal 3 is children and youth ages 5-19 years of age and those people who affect the dietary habits of youth. The initiative encompasses the programming efforts targeting limited resource audiences, such as those conducted in the Expanded Food and Nutrition Education Program, the DSS Food Stamp Nutrition Education Plan, and those foods and nutrition programs designed for traditional Extension audiences. The primary focus to the projects is: To provide food and nutrition educational programs for youth which will improve their nutritional status; provide educational programs for young adults/families which will improve their skills in choosing, preparing, and consuming a nutritionally adequate diet, and work with food and nutrition related agencies and organizations to coordinate food and nutrition educational efforts.

There was a total of 3,626.5 days or 15.8 FTE reported in areas that are classified under Goal 3. The total number of contacts reported in this goal was 55,091. The breakdown of these

contacts are as follows: 7,237 white males, 16,537 white females, 11,459 black males, 19,242 black females, 241 classified as other males, and 375 classified as other females. From this group, a total of 16,409 were classified as limited resource. Accomplishment that were reported to the Clemson University Information Management System show 2,000 total programs and activities conducted in projects that are classified under Goal 3. There were a total of 33,041 participants who completed these educational programs. Of those completing the programs 24,778 reported increasing their knowledge as a result of their participation. Of those participants who reported increasing knowledge, 8,100 reported that they adopted or increased the use of recommended practices as a result of the programs. The total state level allocations for the initiative team classified under Goal 3 was \$22,600.

Key Theme – Human Health

a. The nutrition education programs for youth covered topics including healthy snacks, kids in the kitchen, cooking with books, baking buddies, farmer for a day, and 5-a-day. A variety of methods were used including day camp, demonstration contest, workshop, health fair, school enrichment and Global Food Web (GFW) programs.

b. Impact –

There were 1029 programs conducted involving 23,916 youth. Counties reported 379 youth in nutrition and food 4-H competitive events. There were 682 volunteers reported in this initiative. A total of 37 Global Food Web (GFW) programs were conducted reaching 1,132 youth, 57 of these indicated they plan to become actively involved the food security issues presented in GFW. There were 26 volunteers assisting with the GFW educational programs. Using federal Food Stamp dollars, counties report reaching 15,078 limited resource youth in 629 nutrition education programs. There were also 656 volunteers involved.

c. Source of Federal Funds – Smith Lever 3b&c and food stamp.

d. Scope of Impact – State

Key Theme – Human Nutrition

a. Programs conducted through this effort include teaching the Food Guide Pyramid, Dietary Guidelines, teaching nutrition through teachers and other multipliers, and food preparation skill development.

b. Impact –

There were 230 programs presented which reached 3,896 consumers and multipliers. Of this total, 1471 report they have adopted one or more of the Dietary Guidelines or are using a skill which will improve their nutritional status. Using federal Food Stamp dollars, counties report reaching 4,244 adults through 277 nutrition education programs. Of this total, 3,471 report an increase in knowledge and 1,905 report developing or increasing a skill which improves their nutritional status.

- c. Source of Federal Funds – Smith Lever 3b&c and food stamp dollars.
- d. Scope of Impact – State

Goal 4: Greater harmony between agriculture and the

environment.

Overview:

Programs under Goal 4 are focused on five major initiative areas: 1) Sustainable Forest Management and Environmental Enhancement; 2) Sustainable Agricultural Production Systems; 3) Reducing the Impact of Animal Agriculture on the Environment; 4) Natural Resources and the Environment; and 5) Household and Structural Pest Control and Pesticide Training.

The Sustainable Forest Management and Environmental Enhancement initiative has five project areas: 1) Provide Landowners with Alternative Silvicultural Systems; 2) Restoration and Management of Longleaf Pine; 3) Management Options for Conservation Reserve Program Lands; 4) Master Tree Farmer/Master Woodland Owner; 5) Broadening the Practice of Sustainable Forestry on all Forest Lands. The primary focus of this initiative was to teach sustainable forest management concepts and practices to private landowners and industry in order to broaden these practices on all forest lands. The programs emphasized: 1) development of landowner understanding of even-age and uneven-age pine management, mixed pine-hardwood management and natural regeneration systems; (Programs on these subjects were also provided to forestry consultants and professional foresters who manage forest lands for landowners.) 2) economic and ecological significance of restoring and managing the longleaf pine ecosystem; 3) the “Master Tree Farmer” program both within South Carolina and the southeast region; and 4) logger education and training on “A Best Management Practice”, and principles of sustainable forest management.

The Sustainable Agricultural Production Systems initiative has four major project areas: 1) Confined Animal Production Systems; 2) Integrated Crop Management – Horticultural Crops; 3) Integrated Crop Management – Agronomic Crops; 4) Grazing Livestock Production Systems. With the expectations for agricultural producers to become better stewards of the land, the programs that are a part of these projects focused on teaching production and management skills that ensure sustainability. These program specifically addressed both environmental and economic sustainability of agronomic, horticultural, and livestock production systems. Programs were delivered in the form of field days, educational meetings, demonstrations, and workshops and focused on nutrient management, water quality, production, and economic efficiency.

The initiative, Reducing the Impact of Animal Agriculture on the Environment has two project areas: 1) Increase the Adoption of Environmentally Sound Animal Waste Handling and Utilization Systems and 2) Increase the Adoption of Nuisance Prevention Practices by Animal Industries. The major focus of this initiative is to teach the scientific principles of safe manure storage, utilization, and alternative conversions to animal producers. The results being a decrease in animal agriculture impact on the environment, resulting in reduced

public concern over the expansion of confined animal production. The programs conducted emphasized the safe storage of different types of animal manure, and alternative technologies available for conversion to environmentally safe materials; methods of disposing of dead animal from intensive animal production units; utilization of nutrients as fertilizers; methods of reducing vectors and controlling odors; and the delivery of the Confined Animal Manure Managers Certification Program.

The Natural Resources and the Environment initiative has a total of six major project areas: 1) Best Management Practices (BMP) Education; 2) Water Quality Education; 3) Natural Resource Education; 4) Nuisance Species; 5) Tourism/Recreation; and 6) Water Quality and Natural Resource Education for Youth. The major goals for this initiative was to educate landowners to accept and use practices that promote sustainable use and management of natural resources. Also, programs were offered to landowners and youth on the impacts of land management on water quality and on fish and wildlife resources. In addition, there were educational programs provided to private landowners on wildlife damage management.

The final initiative, Household and Structural Pest Control and Pesticide Training contains four project areas: 1) Prevention and Control of Excessive Moisture in Structures; 2) Pest Control/ Management Practices in Human Environments; 3) Wood Destroying Insect Pest Control; and 4) Pesticide Applicator Training and Education. The focus of programs in these project areas was on increasing clientele knowledge and implementation of: 1) safe pesticide application and responsibilities under pesticide regulations through Extension training and educational programs, this includes the certification and recertification training and education of pesticide applicators; 2) structural design that is conducive to pest damage; 3) alternative control methods for wood destroying insect; 4) integrated approaches to pest management practices in human environments; 5) building codes related to excessive structural moisture; and 6) structural moisture management practices.

There was a total of 12,510.0 days or 54.4 FTE reported in the areas classified under Goal 4. The total number of contacts reported in this goal was 151,259. The breakdown of these contacts are as follows: 102,426 white males, 34,432 white females, 9,279 black males, 4,254 black females, 609 classified as other males, and 259 classified as other females. From this group, a total of 3,542 were classified as limited resource. Accomplishment that were reported to the Clemson University Information Management System show 3,042 total programs and activities conducted in projects that are classified under Goal 4. There were a total of 69,660 participants who completed these educational programs. Of those completing the programs, 44,454 reported increasing their knowledge as a result of their participation. Of those participants who reported increasing knowledge, 27,100 reported that they adopted or increased the use of recommended practices as a result of the programs. The total state level allocations for initiative teams classified under Goal 4 were \$80,200.

Key Theme ¥ Forest Crops

- a. Many landowners fail to manage their forestland because they object to clearcutting or other conventional intensive practices that focus primarily on timber production. The purpose of this project is to encourage these landowners to develop management plans by providing them with alternative silvicultural systems that are suitable for their individual objectives. Alternative systems include uneven-age management, mixed pine/hardwood management and natural regeneration systems.

Educational efforts have been focused on both professional resource managers and landowners. Most landowners are unaware that alternative silvicultural systems are available and professional foresters are generally biased in favor of clearcutting and intensive management methods. Our objective is to provide landowners with an understanding of how these systems can be used to meet their desired management goals and to make trained, professional foresters available to service their needs. The first draft of a proposal to fund intensive training on uneven-age management was written in 2001. We expect to submit a final draft during the year 2002 and to use funds to expand formal training to a meaningful level within the state.

- b. Impact --

During the year 2000--01 most efforts on this project were conducted at the county level. Forty-eight programs and activities were reported by county agents. Approximately 700 people completed non-formal programs with approximately 80 % reporting increased knowledge of the subject. Sixteen percent have reported adopting or increasing use of practices discussed during the training. No formal, statewide training programs were conducted during the report period. The number of FTE's devoted to this project was 1.4.

- c. Source of Federal Funds ¥ Smith Lever 3b&c

- d. Scope of Impact - State

Key Theme ¥ Forest Crops

- a. Longleaf pine is a highly desirable species because of its superior growth form, wood properties and the diversity of plant and animal species associated with the ecotype. Unfortunately, only a small fraction of the longleaf forest remains within its natural range. Renewed interest in the species has developed because of its ecological significance as well as financial reasons. Because of land ownership patterns, the majority of longleaf restoration efforts will require regeneration on non-industrial private lands. The objective of this project is to provide landowners and professional foresters

with background and technical information necessary to expand longleaf production within its natural range.

b. Impact --

A total of 17 activities and programs were reported by county agents. These included, but were not limited to a workshop in Columbia, SC – “Restoring Longleaf Pine in the Sandhills”. The workshop was attended by 84 foresters and landowners. Altogether, a total of 832 people completed non-formal educational programs on Longleaf Pine. Approximately 70 % reported increased knowledge as a result of the activities and programs and 28% indicated that they have or will adopt practices discussed during the training. The number of FTE's devoted to this project was 0.4.

Approximately 8,000 additional acres of longleaf pine were planted during the 2000 – 01 reporting period.

c. Source of Federal Funds - Smith Lever 3b&c

d. Scope of Impact ∓ State

Key Theme ∓ Forest Resource Management

a. Thousands of acres of pines have been planted on former agricultural lands under the Conservation Reserve Program. Now that the program is maturing some farmers have considered converting lands back to crops while others are uncertain about future management strategies. The objective of this project is to provide educational programs to inform farmers of the economical and ecological potential of retaining these lands in forest cover. Many of the stands are in need of thinning in order to maintain health and vigor of crop trees and create access for other practices including application of municipal and agricultural waste.

b. Impact --

No formal programs were conducted under this project in 2000 -- 01. Counties reported only two activities for this project. One hundred and two people completed non-formal education and reported increased knowledge. During the following planning year we may consider discontinuing efforts on this subject area. The number of FTE's devoted to this project was 0.2.

c. Source of Federal Funds - Smith Lever 3b&c

d. Scope of Impact ∓ State

Key Theme ¥ Forest Resource Management

- a. The Master Tree Farmer/Master Woodland Owner program provides intensive forestry and wildlife training to landowners in return for 25 hours of volunteer time promoting forestry and the Tree Farm program in South Carolina. In 2000 - 2001 Master Tree Farmer continued as a flagship program for Extension Forest Resources. In Spring of 2001 the program was broadcast from Clemson University via videoconference to 14 states and 132 down-link sites across the south and to 4 states in the fall. Graduates received a total of 28 contact hours of instruction in forestry topics such as Forestry as an Investment, Pine Management, Hardwood Management, Marketing and Harvesting, and Wildlife Management.
- b. Impact --

By using the video conference technology, the program was delivered to 2875 forest landowners in 2001. Landowners representing 748,277 acres of forest land completed the course. Approximately 47 % of the landowners were under 50 years of age and 20 % were female. The Master Tree Farmer Program utilized 21 volunteers. The number of FTE's devoted to this project was 0.6. The following impacts were derived from analysis of evaluation data collected after landowners completed the training:

 1. Ninety-eight percent of the participants would recommend the program to other landowners.
 2. Ninety-three percent feel that the program will save them money when practicing forestry on their property.
 3. Ninety-four percent of the landowners report that they will earn money by using knowledge they gained from the program for an estimated total gain of \$16 million.
 4. Based on increased knowledge, eighty-eight percent of the landowners completing the course plan changes in the management of their forest property.
 5. Eighty-eight percent of the graduates indicated that they would attend a more advanced training program if it were offered.
- c. Source of Federal Funds - Smith Lever 3b&c
- d. Scope of Impact – Multistate

Key Theme - Forest Resource Management

- a. The objectives of this project are to: (1) Encourage landowners who sell timber to reforest following harvest, (2) inform landowners of the economic and environmental benefits of using Best Management Practices (BMP's) in all forest management operations, (3) develop and conduct training programs that improve the professionalism of logging and other timber

operations businesses, and that promote sustainable forestry principles and (4) work with established groups within the forestry community to support and promote appropriate training and outreach programs related to sustainable forest management. Some significant activities for 2001 included: (1) continued implementation of the South Carolina Timber Operations Professional training program, (2) initiation of a Streamside Management Zone training program, and (3) completion of the publications – *U.S. Forests Facts & Figures 2001* and *Historical Overview of the Southern Forest Landscape and Associated Resources*.

b. Impact --

This program generated considerable activity at the county level. Counties reported 43 activities with 1267 landowners completing educational programs and 1038 or approximately 80 % reporting increased knowledge as a result of the programs. Eight-five landowners reported the application of BMP's to their forest property.

Major efforts within this project were directed at logger training and education under the Timber Operations Professional (TOP) program. The program is jointly administered by Clemson Extension Forestry and the South Carolina Forestry Association. During this reporting period 635 loggers and foresters attended 17 programs conducted across the state. The program has had a significant beneficial effect on forest practices. Eighty-nine percent of the wood delivered to mills in South Carolina is delivered by loggers that have completed the TOP training. The percentage of acceptable overall Best Management Practices conducted on forest lands within the state, and reported by the South Carolina Forestry Commission has increased from 86.4 % in 1996 to 91.5 % in 1999. The TOP training program is supported with 15 volunteers.

c. Source of Federal Funds – Smith Lever 3b&c, SMZ project – EPA & DEHEC

d. Scope of Impact – State

Key Theme – Sustainable Agricultural

a. The confined animal production systems project was comprised of programs and activities that were designed to improve production efficiency and to provide information on current and emerging specialty animal industries. Efforts focused on increasing efficiency of production, cutting costs, and other management options.

b. Impact –

In terms of accomplishments, 135 programs/activities, which reported to the confined animal systems project were completed. These activities saw 1,335 people complete non-formal educational programs and 871 of those report increased knowledge with 446 indicating that they had changed or adopted new practices.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Sustainable Agricultural

- a. The horticultural production systems project focused on programs and activities related to integrated crop management. The areas of concern were improving profitability and reducing the negative environmental impacts of horticultural cropping systems. Programs related to the adoption of new horticultural production systems were also a major thrust of this project.
- b. Impact –
The horticultural systems project had 418 activities/programs report to it with 3,836 people completing non-formal educational programs and 2,606 of those reporting increased knowledge. Six hundred seventy-two people adopted practices/changes in production practices while 439 people completed programs on ICM (Integrated Crop Management) and planned to adopt those practices that represent or impact 37,694 acres of production fields. There were an additional 884 acres planted to new alternative horticultural crops.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Sustainable Agricultural and Nutrient Management

- a. The agronomic production systems project focused on programs and activities related to integrated crop management. The areas of concern were improving profitability and reducing the negative environmental impacts of agronomic cropping systems. Programs related to the adoption of new agronomic production systems were also a major thrust of this project. In addition, programs dealing with the adoption of alternative methods of nutrient and pest management were conducted.
- b. Impact –
Six hundred fifty activities/programs were reported to this project with over 9,000 people completing non-formal educational programs. Of these 4,504 people reported increased knowledge and 2,185 adopting recommended practices. Further, 566 people completed ICM programs and planned to adopt recommended practices. Extension personnel reported 592 limited resource contacts dealing with the agronomic systems project. Over 114,000 acres had animal wastes applied as nutrient sources as a result of project activities.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Sustainable Agricultural

- a. The grazing animal production systems project focused programming efforts on several areas dealing with improved efficiency of production and utilization of resources. These areas included: improved marketing of grazing livestock; increase utilization of residue, waste, and by-products for supplemental feed; improved grazing management practices for increased efficiency of production; protection of water quality in and from pastures; and increased awareness of herd health and reproduction on economic efficiency.
- b. Impact –
The grazing animal systems project had 248 producers participate in the Pride/Quest and other managed marketing programs while just over 2300 people improved their breeding program by utilizing EPD's in sire selection and proper breed complementation. Just under 428 people reported implementing recommended grazing management systems to improve enterprise profitability and decrease detrimental environmental impacts of livestock. Another 693 producers adopted improved health and reproduction programs. These numbers represent a significant proportion of the 10,778 people who completed one of the 452 non-formal educational programs or activities. In all, 7,439 people reported adopting or increasing the use of recommended practices. The grazing systems project had the most contact with limited resource

clientele, reporting 721 contacts for the year. These represent the many small landowners with a few livestock, cattle, sheep, and/or goats.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Agricultural Waste Management

a. A total of 579 staff member days were devoted to increasing the adoption of environmentally sound animal waste handling and utilization systems. Two days of inservice training were held for County and State Extension staff, with participation from USDA-NRCS and SC DHEC staff. A total 58 extension agent days and 26 other agency staff days of training for agents included:

- update on the Confined Animal Manure Management certification program for poultry
- methods of odor control
- IPM practices for vector control
- techniques in monitoring fly populations
- avoiding bait sensitivity by rodents
- utilizing swine manure nutrients in cropping systems
- advances in animal waste treatment

Programs were also developed to train producers of confined animals in manure management, and to certify that these producers have achieved the required level of training by testing knowledge levels.

a. Impacts –

In 2000, forty-two agents and agency staff passed the certification exam for poultry manure management. In 2001, emphasis switched to training poultry producers. All new South Carolina pork producers are required by law to pass the certification program for lagoon management. Poultry producers will be required to take training in dry litter management in 2002. All producers will be required to take continuing education programs developed by Clemson University Extension Staff. Members of the initiative have prepared a training manual for poultry producers. This program will be the educational focus of manure management for 2001.

There were 56 activities conducted in South Carolina to teach various portions of best management practices in waste management. These included calibration of equipment workshops, composting of mortality demonstrations, and meetings to discuss manure sampling, soil sampling and nutrient application. A total of 721 producers participated in these activities. Of these, 565 reported an increase in their knowledge on the subject.

Three hundred and thirty four producers have indicated they have adopted or increased the use of best management practices in manure management. There were 288 producers that completed training in protecting quantity and quality of surface and ground water, and 84 that indicated that they intend to put these practices to use.

One hundred and nine producers reported they have improved water management practices. Ninety-seven completed program training and plan to protect soil resources. Thirty-one producers adopted soil protection practices.

The formal project was focused primarily at inservice training of County Extension Agents. The state staff involved, as well as several area livestock and water quality agents have been active participants in manure management issues on both the Regional and National basis, and have attended and participated in a number of animal waste issue conferences and workshops. The core team members of the project have become the recognized program coordinators for the mandated Confined Animal Manure Management Certification program as specified by the State Legislature. Producers are required to receive training as mandated in R 41.63. This team has prepared two training manuals, one for lagoon systems and one for dry litter systems of manure management. The lagoon system manual may be located at the URL address:
<http://www.clemson.edu/peedeerec/certifi/CAMM.html>.

A total of 2,764 non-program contacts were made through support of manure management practices.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Agricultural Waste Management

- a. There were 5 activities and programs conducted to increase the adoption of nuisance prevention practices with livestock producers. In addition, an entire chapter of the Confined Animal Manure Management training manual deals with controlling vectors such as flies and rodents.
- b. Impacts –
A total of 91 producers were reported to have completed non-formal educational programs involving nuisance prevention. Of these, 58 participants reported an increase in knowledge and 15 indicated they have adopted best management practices to reduce rodent and fly populations on animal production farms.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Natural Resources Management and Soil Erosion/Quality

a. The Best Management Practices (BMP) education project focused on a variety of programs that were designed to increase acceptance of practices that conserve and enhance natural resources (i.e. Home-A-Syst program, CAS and Master Waste Educator). Team members wrote two new chapters for Home-A-Syst and CAS, worked with homeowners, and volunteers from such group as FOLKS on water quality, participated on Environthon Steering Committee, conducted workshops and demonstrations for best management practices, including waste recycling.

b. Impact –
Workshops and demonstrations were conducted in 5 counties on grazing practices and water quality. Over 15 presentations and/or displays for Home-A-Syst were presented at environmental meetings and festivals throughout the state. All members of FOLKS receive the monthly newsletter and often 100+ will participate in activities. Activities continue to be directed toward a \$250,000 watershed education grant received from SCDHEC/EPA that focuses on BMP education in the Keowee watershed. Creative Compost Curriculum presented to 47 Teachers from across the country at Environmental Education Institute. 100% would recommend program to their colleagues.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State, Multistate Extension

Key Theme – Natural Resources Management

a. The South Carolina Master Naturalist program graduated its first class of 22 Master Naturalists, and the second class was fully enrolled. Educational materials are being updated. Presentations were made by team members at one national and one state Environmental Educator meeting on the program. Workshops and programs were conducted for management of wildlife on forested lands, including three “Master Wildlifer” courses. Information on backyard wildlife management was provided to school children and homeowners, using a variety of media.

b. Impact –

Each of the 22 Master Naturalists had to complete over 40 hours of volunteer work.

Ten people graduated from the "Master Wildlifer " course presented in Colleton. They indicated that they would earn \$106,000 and save \$56,000 in the future on their lands as a result of the course.

A workshop in Alabama was presented to over 200 people on the management of wildlife on forested lands. Additionally educational programs on such topics as bats, bird feeding and bird houses, were presented to school children, civic groups and other mixed audiences, using a variety of media, including, displays, radio and TV broadcasts.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – Multistate Extension (South Carolina and Alabama)

Key Theme – Natural Resources Management

- a. Team members used presentations, workshops, short courses and hands-on programs to promote wise use of natural resources in the context of tourism.
- b. Impacts –
Five presentations were made on equestrian trail management at national or regional meetings throughout the U.S., and a 4-day Southeastern Equestrian Trails Conference was held at Clemson. This conference had 163 attendees from 25 states. Conducted a National Watchable Wildlife Conference and multiple radio and TV program interviews reaching over 250,000 households.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State and Multistate Extension

Key Theme – Water Quality

- a. A variety of programs were conducted by the project team in support of Water Quality Education covering rivers, ponds, and lakes

Conducted a workshop on Stream Restoration Using Natural channel Design Audience was extension specialists, state and federal agency people, county agents, engineers and special interest groups.

Conducted conferences and workshops on Urbanization and Water Quality. Audience was city and county managers, state and county regulators, county Extension agents, concerned citizens and faculty from regional Universities. Presented water quality and quantity data our team had collected from the host watershed (Spartanburg, SC)

Activities with Friends of Lake Keowee (FOLKS) focused on training these volunteers as trainers/leaders for other volunteer groups. For example, team leaders were trained for the Sediment Sampling Team, the Metals Sampling team, the Fecal Coliform Sampling Team.

Conducted training with forestry professionals on How Streams Function also provided Biological Monitoring Training session.. The impact of this work is that forest land managers know how their management decisions affect the functioning of streams. Additionally, principles of biological monitoring were taught in the field so that participants saw how land-use practices impact aquatic organisms.

- b. Impact –
Impact from workshops and conferences was high because participants indicated that they now know the science behind our concern or regulations and they are now more willing to work to protect water quality.
- c. Source of Federal Funds – Smith Lever 3b&c, EPA/SCDHEC 319
- d. Scope of Impact – State

Key Theme – Natural Resource Youth Education

- a. County agents collaborated with a project team member to conduct State 4-H Wildlife Habitat Evaluation Contest. The state winning team of 3 youths and one coach participated in the National Contest in Tennessee. A week-long camp for youth on quail management was presented. Two one-day outings on ecology and forest management for fourth graders were conducted.
- b. Impact –
The Wildlife Habitat Evaluation Contest reaches youths in schools throughout the state. For example 569 educational and contest entrance packets were delivered to Clarendon County Teachers alone. The outings for fourth graders involved over 100 students.
- c. Source of Federal Funds – Smith Lever 3b&c

- d. Scope of Impact – State

Key Theme – Wildlife Management

- a. The nuisance species project team continues to answer multiple phone calls per week on nuisance wildlife problems. They conducted slide shows on backyard nuisance wildlife and on aquatic weed control. They also conducted a workshop on wildlife damage management , and two workshops on beaver damage.
- b. Impact –
County agents, natural resource professionals, and nuisance wildlife control operators attended the workshop on wildlife damage management. Thirty-seven landowners attended the two workshops on beaver control. All reported gaining new knowledge. The 17 participants in the second workshop manage over 70,000 acres of land in Georgia and South Carolina. Sixteen of the participants said that the knowledge gained would help them save \$90,000 in the future.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State, Multistate Extension (GA, SC)

Key Theme – Coastal Natural Hazards

- a. Team member made over 15 oral or poster presentations, four radio spots, multiple displays and two web pages on materials and methods for protecting homes from storms, on hurricane preparedness, on the 113 Calhoun Street project, and WIND_AID. TV episode on Bob Vila’s Home Again featuring 113 Calhoun Street aired. Also gave multiple tours of 113 Calhoun Street. Conducted four WIND-AID work days to provide homes with storm-proof window shutters. Coordinated and conducted inservice training program on Masonry Home Maintenance Training
- e. Impact –
Presentations on materials and methods for protecting homes from storms, and on the 113 Calhoun Street project made to such groups as county agents, architects, builders, engineers, insurance underwriters and home owners, and teachers. Over 100 professionals and 50 homeowners attended one or more of these presentations, as well as 75 teachers and over 500 students. WIND-Aid workdays involved over 26 volunteers and were able to install shutters on 5 homes. Two trainings involved 13 homeowners and 13 agents or other professionals.
The Wildlife Habitat Evaluation Contest reaches youths in schools throughout the state. For example 569 educational and contest entrance packets were delivered to Clarendon

County Teachers alone. The outings for fourth graders involved over 100 students. TV episode on Bob Vila's Home Again show airs nationally.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State, Multistate Extension

Key Theme – Pesticide Application (Initial Certification)

- a. Pesticide applicators are trained by the Cooperative Extension Service to become initially certified as Private Applicators. Applicators are trained to use the pesticide label and other information when handling Restricted Use Pesticides to protect themselves, agricultural workers, the public, water quality, and wildlife, especially endangered species.

This year in South Carolina, 59% of the trainees answering the use demographic question said they apply Restricted Use Pesticides in traditional agricultural crops, 20% in forestry, 17% in nurseries and on ornamentals, and 9% in greenhouses (percentages total to more than 100 because individual apply pesticides in more than one area.)

- b. Impact –
Initial Certification Training of pesticide applicators was given by County Pesticide Training Coordinators at a minimum of 44 trainings. A minimum of 306 pesticide applicators was trained. Of 68% of those trained who voluntarily answered the race demographic survey question, 80% were white, 16% were black, 4% were other. Of the 94% who answered the sex demographic survey question, 90% were male and 10% were female.

Based on an average of individual training averages, trainees, pre-test / posttest scores showed that they increased their knowledge of how to handle pesticides safely by 21% as a result of the training.

- c. Source of Federal Funds – EPA pass-through to the USDA
- d. Scope of impact – State Specific

Key Theme – Pesticide Application (Recertification)

- a. Certified Private Pesticide Applicators are required to be recertified every five (5) years. While there is not a way to verify numbers (because not all Recertification credits are obtained a

one time, in one training), however, virtually all Private Pesticide Applicators receive all of their five (5) required Recertification credits through the County Extension offices. (Commercial applicators also receive some of their Recertification credits through the County Extension offices. Many receive credits through other Extension sponsored or partnered programs.)

b. Impact -

Private Applicators get Recertification training in one or more of 16 topics, including ground water protection, worker safety, integrated pest management, transport and disposal of pesticides and rinsates, calibration and maintenance of application equipment.

This year County Extension offices conducted a minimum of 7* Recertification trainings. In total, 2,662 Private Applicators were recertified (received their final accumulation of 5 Recertification credits) this year. An unknown number of applicators were trained this year who obtained 1 – 4 Recertification credits.

*Based on applicator attendance in early Recertification time blocks, the number of scheduled Extension Recertification trainings now vary in number across the five year Recertification block, increasing in frequency towards the end of the block. Numbers of Private Applicators becoming Recertified varies among years because Recertification is based on a five-year cycle. Few Private Applicators are Recertified in the initial years of the cycle, most are Recertified in the last two years and especially the last year. Also, not all Extension partnered trainings are recorded on the Pesticide Information Program web site because of sponsorship. Additionally, many Private Applicators obtain some or all of their Recertification credits through self-study using material supplied by the County Extension offices.

c. Source of Federal Funds - EPA pass-through funds to the USDA

d. Scope of Impact – State specific

Goal 5: Enhanced economy opportunity and quality of life for Americans.

Overview:

Programs under Goal 5 are focused on four major initiative areas: 1) Community, Leadership and Economic Development; 2) Families; 3) 4-H and Youth Development; and 5) Volunteer Management. A total of 21 projects comprised these four initiative areas.

The Community, Leadership and Economic Development initiative is comprised of three project areas: 1) Community Leadership Development; 2) Decision Technologies and Methods; and 3) Marketing Place. This initiative addresses the need for increased leadership training and development in South Carolina's rural, transitional, and inner city areas. The

rural areas and inner city neighborhoods are frequently overlooked, ignored, or isolated from the benefits of sustained economic development found in other areas of the state. The transitional areas include counties at the fringe of metropolitan sprawls where the transition from agricultural to residential and industrial uses is taking place. These areas, characterized by flux or deprivation often lack progressive leadership which can foster a sense of teamwork and regionalism to address the locale's economic and quality of life concerns effectively. Of additional concern is the business development, retention and expansion needs in rural counties and also the Community Design Assistance Program. This program provides in-depth architectural, landscape, historical, and preservation designs, downtown historical preservation and rehabilitation to selected communities.

A major focus of the Community, Leadership and Economic Development initiative is to bring together a cross-section of local leaders to work on concerns at the county and regional level. Improving the quality of life and building great communities for the residents of South Carolina is the primary goal within this initiative. Programming efforts have included engaging and partnering with citizens, local leaders, and government officials in a variety of educational settings.

In the Families initiative, the Building Family Strengths project addresses the dramatic social, demographic and economic changes our society has undergone in the past century that have deeply affected youth and their families in this country. Children need families for healthy physical, mental, social, moral, and emotional development. Strong families provide children with a sense of belonging and identity and create hope for the future. At the heart of concern about contemporary families is the awareness that children need committed, supportive caregivers who will be with them throughout their development.

Three projects under the Families initiative address the need for South Carolina families to have educational information on effective resource management. These projects are Money 2000, Money 2000 for Youth, and Money 2000 for Housing Goals. Family resource management programs focus on decisions which place the greatest demands on family budgets--shelter, transportation, and consumer goods (i.e. food and clothing). Financial management education increases the economic stability of individuals and families. Textile and clothing programs, under the Textile Product Education for Youth project, support agricultural commodities through the promotion, selection, care, and preservation of textile fiber products. Housing programs concentrate on helping people achieve family housing goals, including home ownership and improvement.

Encouraging people to become active in their community is a national, state and local priority. The Extension System as a whole works to develop a statewide management system to more effectively recruit, recognize, promote and value partners/cooperators in order to maximize benefits. Under the Volunteer Management initiative, efforts mainly focused on enhancing effective volunteer management; implementing an effective volunteer

management system for collaborating with partners; evaluating use of volunteers in Extension programs; providing training opportunities for programmers and non-Extension personnel; establishing linkages with non-Extension staff; increasing knowledge of volunteer opportunities and program services, and marketing.

Volunteers play a critical role in multiplying the Cooperative Extension Service's efforts to disseminate research-based information to the citizens of South Carolina. Volunteers work in all program areas of the Cooperative Extension Service including 4-H Leaders, Family and Community Leaders, Master Waste Educators, Master Gardeners, Palmetto Leadership, Master Food Preservers, Advisory Committee, Program Committee, Action Committees, Forest Landowners, Cattlemen Associations, Keep America Beautiful Board and Subcommittees, Focus Groups, etc.

The 4-H and Youth Development initiative, offers a wide variety of programs and activities that can provide experiential learning opportunities for youth ages 5-19. South Carolina families and youth have basic life skills and developmental needs that are addressed by educational programs offered through 4-H. Adults and family members can benefit from a child's involvement in the 4-H and Youth program and may become involved as volunteers. 4-H programs, activities, and events are conducted in nine project areas. Eight of these project areas are the nationally recognized 4-H curriculum areas: 1) Communication and Expressive Arts; 2) Healthy Lifestyles; 3) Personal Development and Leadership; 4) Consumer and Family Science; 5) Plants and Animals; 6) Citizenship and Civic Education; 7) Environmental Education and Earth Science; and 8) Science and Technology. The ninth project is Teaching KATE (Kids About the Environment) which is a major youth program in South Carolina.

There was a total of 13,515.5 days or 58.8 FTE reported in areas that are classified under Goal 5. The total number of contacts reported in this goal was 247,750. The breakdown of these contacts are as follows: 74,808 white males, 85,222 white females, 37,633 black males, 47,803 black females, 1,221 classified as other males, and 1,063 classified as other females. From this group, a total of 19,290 were classified as limited resource. Accomplishment that were reported to the Clemson University Information Management System show 5,934 total programs and activities conducted in projects that are classified under Goal 5. There were a total of 123,016 participants who completed these educational programs. Of those completing the programs, 112,328 reported increasing their knowledge as a result of their participation. Of those participants who reported increasing knowledge, 49,419 reported that they adopted or increased the use of recommended practices as a result of the programs. The total state level allocations for initiative teams classified under Goal 5 were \$112,000.

Key Theme – Community Leadership Development

- a. This project addresses the need for increased leadership training and development in South Carolina's rural and transitional areas. Transitional areas include counties at the fringes of metropolitan sprawl as well as and inner city neighborhoods. The target areas often lack progressive leadership that fosters a sense of teamwork and regionalism to address the locale's economic and quality of life concerns effectively. This program provides a facilitated and safe forum where conflicting interests and policies can be addressed constructively through action plans built by established and emerging leaders.

Through task forces citizens must increase leadership skills and effective use of planning tools to address community issues, concerns, and policies. Components include a community asset inventory process, priority setting, socio-economic trend analysis, change management, planning, statistical analysis of local and regional socio-economic profile data, leadership and human capacity development, conflict negotiation, and team and consensus building.

Topical issues addressed include economic development, education improvement, local government, public safety, health care, land use planning, growth management, recreation, tourism, and local cultural appreciation. The curriculum is designed to fit the audience. Web resources are identified to assist local leaders and program participants with task force planning and community issues. News releases publicize task force activities in local newspapers and electronic media. Local elected leaders and their councils utilize information and foster citizen participation and civic responsibility.

- b. Impacts –

During the past year, 343 emerging and established local leaders participated in leadership programs sponsored or supported by Palmetto Leadership. Seventeen separate leadership programs were offered in counties, towns, and regions. These 17 programs covered four municipalities and two regions that included combinations of counties. The 17 program touched 19 of the state's 46 counties in one year. Palmetto Leadership graduated 343 leaders in these counties: Abbeville, Allendale, Anderson (Town of Pendleton), Bamberg, Barnwell, Tri-County Allendale, Bamberg, and Barnwell Region, Beaufort (Beaufort, Bluffton), Berkeley, Dorchester, Fairfield, Greenville (Greenville Inner city - LEND), Hampton, Kershaw, Lexington, Marion, Marlboro, Newberry, Pickens, and Spartanburg (Cowpens).

1. CUMIS FY July 2000-01 planned time for Community Leadership Development is 1,541 days. The days reported are 1,932.5. The reports indicated that 12,233 white males, 10,008 white females, 3,049 black males, 3,709 black females, 148 other ethnic group males and 127 other ethnic group females received educational programming in leadership development. A total of 346 limited resource persons received leadership programs.
2. The number of activities and programs totaled 641. The number of individuals completing non-formal education programs in community leadership training was 13,295.

3. The number of participants reporting increased knowledge was 10,739. The number adopting or increasing uses of practices was 7,328 (55.1% of those completing the programs).
4. The number of task forces is 99. The number of task forces in the 17 Palmetto Leadership programs averaged approximately 2.3 task forces per class (program). Overall the proportion of task forces formed from total community leadership programming is 15.4%. Often the purpose of the general programs is not designed to form task forces. Individual capacity development may be more singular or result in voluntary involvement in pre-existing community activities. In Palmetto Leadership task forces formed to address youth leadership, economic development, business appreciation, educational system support, county promotion materials, tourism plans, human services, and leadership programs. The key outcomes include the formation of strategic and tactical plans to address local concerns noted above. Youth Palmetto Leadership graduated 120 participants in seven counties: Chester, Fairfield Lexington, Marion, Newberry, and Sumter.

A sample of Palmetto Leadership Program and Task Force Outcomes:

- ♣ Habitat for Humanity-Edgefield County hired Palmetto Leadership graduate as director.
- ♣ PL graduate Arlene Traxler won election for Edgefield County Treasurer.
- ♣ PL graduate, Sallie Cooks, was elected to the County School Board.
- ♣ PL Task Force for Habitat for Humanity-Edgefield County has built one house and plans 3 more.
- ♣ PL (Leadership Newberry County) has introduced movies on Saturday mornings at the downtown Newberry Opera House for children. The movies are cartoons, westerns, and general audience movies. This is an effort to promote downtown Newberry. The Task Force also plans to build a downtown park with donated land.
- ♣ Leadership Laurens County graduates have formed a Task Force to recruit a new class for 2002.
- ♣ Edisto Valley Palmetto Leadership graduates have applied for 501c3 status to continue operating the Edisto Development Council. The purpose of the Council is to promote the region's towns of Wagner, Perry, and Sallie in Aiken County.
- ♣ Midland Valley Palmetto Leadership graduates formed a Task Force to offer a Building Family Strengths Program in the Valley in Aiken County.

- ♣ A Palmetto Leadership Task Force in Edgefield County formed a Palmetto Leadership Youth Program. A project undertaken by the youth program graduates is the creation of a Landscape for Learning Project at the new Visitor Center for local Heritage Corridor region.
- ♣ An outgrowth of the Edisto Valley Palmetto Leadership program in Aiken County is the Corbitt Middle School Youth Leadership Program. The youth program graduates have planned a Paint the Drain project for Wagner. This project informs the public about the hazards of pouring paint into storm drains by painting warning notices to prevent pollution.
- ♣ Aiken County Mid-Carolina Middle School Youth Leadership graduates planted flowers to beautify school and increase school pride.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Promoting Business Programs

- a. This project addresses the need for increased expertise regarding economic development methods and strategies in South Carolina’s communities using business retention and expansion (BR&E) models. BR&E accounts for 40-80% of job growth in a community. Locally owned small businesses are growth opportunities for South Carolina. Extension professionals must increase their knowledge and understanding of economic development principles and become an important part of local and regional economic development. As the BR&E credentials of extension staff improve the focus can shift from inservice training to BR&E program implementation. Extension staff has become certified in economic development and BR&E programming.

In the past four years, 18 extension agents with community development responsibility graduated from the SC Economic Developers’ School and were certified as Economic Developers. Sixteen agents became BR&E Certified Consultants and are qualified to coordinate local BR&E Programs. Extension staff members are expected to become an active and engaged resource to local and regional economic development officials. Four of 16 agents actively facilitated a local BR&E program during the past year. They provided resource information from Clemson University, other land-grant institutions, and state economic development agencies. The four BR&E programs are located in Darlington, Beaufort, Barnwell, and Marion Counties.

b. Impacts –

1. To date the most successful BR&E Visitation Program is the Beaufort County BR&E Program started in Spring 1999. Findings were reported in April 2000. Additional planning and policy making continued in 2000-01 with the publication of a Business Resource Guide and the BR&E Visitation Program Research Report. A Business Profiles of Northern Beaufort County is planned for December 2001. The Beaufort County Council, the Economic Development Board of Beaufort County, and the Palmetto Electric Cooperative provided significant financial support to the program. This is a special role for Extension in the state economic development picture. The report prepared by the county community development agent and his staff has been given significant publicity. The report has influenced public policy and the public officials' agenda. Media exposure of the BR&E Report provided an important role in educating public officials and the public about business development opportunities and obstacles in Beaufort County. The report is based on interviews and survey responses from 66 randomly selected business operators in the county. The businesses are engaged in building, manufacturing, and tourism industries.
 2. A reported 390 days of planned time was dedicated to economic development. Decision Technologies and Methods are related to business-related programs. Actual days reported totaled 478.5 thus exceeding the planned time. The audience comprised 1,505 white males, 1,019 white females, 235 black males, 260 black females, 28 other ethnic group males, and 28 other ethnic group females. Seventy-eight individuals receiving programs were in the limited resource category.
 3. There were 105 economic development programs were reported for the year. The number of individuals completing non-formal education programs was 1,691.
 4. All but 50 (N=1,641) reported increasing their knowledge about economic development and decision technologies. This is 97% of the total audience.
 5. Over 79% (N=1,337) of the audience reported the adoption and increased use of these new practices.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Marketing Place – Community Enhancement (Tourism)

- a. The Heritage Corridor was created in South Carolina to attract tourism dollars to a crescent of counties from the foothills to the coast in many historic and rural parts of the state. Rural areas of the state have experienced a shift of jobs and population to urban

areas. Many rural areas must rely on tourism, recreation, and non-manufacturing activities for survival. Coupled with this is the South Carolina Design Arts Partnership that provides communities with desired improvements in architectural, landscape, historical, and preservation designs. Many of the state's rural communities are losing tax base which is reflected in the deteriorating physical appearance of streetscapes, parks, public places, landmarks, and historical sites. This partnership functions in concert with the SC Downtown Development Association, the S.C. Arts Commission, Clemson Extension, historical groups, preservationists, and local government and business leaders to improve and rehabilitate local communities.

The methodology for the Design Arts Partnership includes the use of City and Regional Planning faculty, student interns, and planning class projects through a case study approach. Activities follow a consulting model strategy. Students are graded in terms of their contribution to the project. Community leaders provide continuous input and evaluations of the on-going project. The evaluation process is based on costs, visual features, and collaboration.

b. Impacts –

1. The Marketing Place – Community Enhancement program area had 159 days of planned activity during the past year.
2. The actual number of project activity days reported is 134. During the past year ten on-going and new design and landscape projects (SC Design Arts Partnership) involving an average of 15 participants at each site. This effort includes over 120 activities, festivals, and special programs related to community improvement and enhancement. The audience and participants in the community enhancement arena number 540 white males, 547 white females, 235 black males, 249 black females, 4 other ethnic group males, and 1 other ethnic group female. The number of limited resource participants is 3. It appears that many individuals are indirectly involved in these community enhancement projects as volunteers and do not attend actual educational programs. Informal reports indicate that approximately 200 community members volunteered for activities that planned and managed the SCDAP landscape, redesign, and rehabilitation programs.
3. Reports indicate over 1,049 completed non-formal education programs.
4. Over 92 percent (N=972) participants increased knowledge about design arts, landscape architecture, festivals, and special events to market their communities. The number of active participants varied from less than a dozen persons in very small communities to many dozens in larger more comprehensive projects.
5. The report shows that 911 (86.8%) of the audience completing non-formal education programs adopted or increased the use of the practices taught. Informal reports show that more than 200 participants statewide adopted and used the taught practices

regarding the promotion and marketing of community-based events and programs as volunteers in the Design Arts program alone. Over 180 community members were successful in completing their community's landscape design project.

The Heritage Corridor project has a blacksmith in Region 2 construct artistic ironworks for sale. The Interpretation Center is operational in the Foothills Region. The Heritage Corridor Passport Project educates public school teachers about the Corridor, an African American Trail has been identified; an Agricultural Heritage Center Farm-City Day was scheduled, the Dorn Grist and Flour Mill restoration project was planned, and many brochures and news articles were prepared.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Public Issues Education

- a. This project promotes public issues education and the understanding of the process of shaping unified public policy. South Carolina is a state in transition from an agricultural and textile intensive economy with a large rural presence to a state with diversified economic development, a tourist and migrating retiree destination, and global markets. The state faces challenges regarding coastal and lake area development, environmental sustainability, urban sprawl, and the transition of rural areas and a way of life to an urban-orientation. Public disputes are inevitable in such a changing economic, political, and social setting.

This project provides an opportunity to educate audiences about alternative dispute resolution techniques and other conflict management skills are presented to promote effective comprehensive planning and issue management. Public Issues Management School trains participants to become certified facilitators using facilitation, negotiation, and mediation conflict resolution strategies. The curriculum is a 30-hour program that can be customized to meet specific agency or special audience needs.

The program offers models and practice to refine conflict management skills. Public Issues Education also calls for review and interpretation of federal and state legislation with particular emphasis on the Farm Bill and related agricultural and environmental statutes. Formulating public policy that impacts agricultural profitability and production, sustainable regional economic development, land use, public health, and environmental concerns is a complex process that requires careful facilitation and management. The application of scientific landgrant-based information during the public policy decision process has far reaching implications for future generations.

b. Impacts –

1. During the past year, extension educators planned 115 days to conduct public issues education programs.
 2. The actual reported time allocated to public issues education programs was 100.5 days during the past year.
 3. The audience for these programs included 1,204 white males, 412 white females, 133 black males, and 65 black females. A total of 23 limited resource persons received public issues education programs.
4. The number of activities and programs totaled nine. The number of individuals completing non-formal education programs in community leadership training was 243.
2. The number of participants reporting increased knowledge was 25. The number adopting or increasing uses of practices was 20.
 3. The number of participants reporting a change in attitude about public issues is 143.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Children, Youth, and Families at Risk

a. Extension programming in Building Family Strengths provides opportunities to strengthen families and address issues facing children, youth and families. The program has a developmentally appropriate curriculum designed to strengthen families. This Building Family Strengths program has been the basis for a four-year program of work effort for SC Cooperative Extension. The SC Department of Health & Human Services continue to be partners with continuous financial support throughout this program of work period. Other partners involved in the statewide trainings and county delivery are Department of Social Services (Youth Services Program) Clemson University College of Health Education and Human Development, South Carolina State University, Anderson College, Faith-based institutions and secondary schools in South Carolina. In addition, Building Family Strengths has been identified by the CSREES Family Development/Resource Management base program team as a program of excellence. Utilizing the train-the-trainer model, this holistic approach to family programming has been successful in a variety of settings that include traditional classrooms, state youth services, county

extension Family and Consumer Sciences and 4-H agents, student teacher training, and non-profit organizations.

b. Impact –

In February 2001, a National Strengthening Families and Youth Conference was sponsored with over 160 participants across the US and Australia for professionals working with youth and families. Throughout the year, many train-the-trainer workshops were conducted by state and county extension faculty.

The focus of the Building Family Strengths program this has been on curriculum development and training utilizing the train-the-trainer model. To this end, professionals representing Extension, secondary schools, Headstart, daycare personnel, higher education, human service agencies, law enforcement, and clergy have been trained throughout the state.

The trainings were designed for diverse work settings and provided the basis for partnerships in the project. It also increases Extension's visibility and ability to program in many different settings. In addition, the curriculum design is applicable to audiences reached by many organizations.

The delivery of the Building Family Strengths curriculum throughout the state has demonstrated Extension's ability to offer train-the-trainer trainings (for a fee) to other professionals. The new planning cycle focuses on marketing the revised Building Family Strengths curriculum and targeting later life development stages – Building Family Strengths for Later Life to address emerging family issues of baby boomers.

There were 1,191 days reported for this project by Extension personnel across the state. A total of 1,805 white males, 3,042 white females, 2,316 black males, 3,262 black females, 85 other males, 76 other females and 1,728 limited resource contacted by Extension personnel working in this area. This project is reaching a very diverse audience. In addition there were 273 activities and programs conducted with 6, 423 participants completed non-formal education programs. Of those individuals completing programs 5,752 participants reported increased knowledge and 1,370 participants adopted or increased use of practices.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Family Resource Management

a. Programs in this area are focused around the **Money 2000** concept which is enhancing the economic capacity of our families, communities, state, and nation. The basic **Money 2000** personal financial management program is designed to increase the financial stability and economic well-being of South Carolinians through reduced household debt and increased saving. **Money 2000 for Youth** encourages youth to set and achieve financial goals and increase their consumer and financial literacy. **Money 2000 for Housing Goals** focuses on helping families set and achieve desired shelter goals. Objectives will include reducing debt or saving money in order to qualify for mortgages, housing repair and remodeling, or obtaining accessible housing. **Textile Product Education for Youth** is also included in this report.

Educational programs are were conducted by county agents, specialists, and EFNEP professionals. A quarterly newsletter was mailed to all enrollees with requests for goal accomplishment progress reports.

b. Impacts –

In the spring of 2001, a random sample of 346 of the 3200 Money 2000 enrollees in the program was drawn and the participants were interviewed by telephone. There were 179 useable responses for a response rate of 51.7%. The four-year progress reported toward savings goals was \$424,575.25 and the total debt reduction reported was \$385,602. This represents an average savings amount of \$2372 per survey participant and an average debt reduction of \$2154 for the useable responses. Generalizing these results to all 2826 participants from 96% (44) counties enrolled at the time of the sample selection would indicate total savings of \$6,703,074 and total debt reduction of \$6,087,769 for **a total economic impact of \$12.8 million for the four years of the Money 2000 program within a 5% margin of error** (The sampling methodology yields a 5% sampling error according to Krejcie & Morgan, 1970).

Additional impact data for each of the Money 2000 projects are as follows:

Money 2000 (Adult Program) - There were 475.5 days planned and 289.5 days reported in this project area equaling 1.3 FTE's with a total of 2,316 contacts.

1. Number of activities and programs conducted.	115
2. Number of people completing non-formal education programs.	1,859
3. Number of participants reporting increased knowledge.	1,503
4. Number of participants adopting or increasing use of practices.	1,196

Money 2000 for Youth - There were 435 days planed and 395.5 days reported in this project area equaling 1.7 FTE's with a total of 4061 contacts.

1. Number of activities and programs conducted.	110
2. Number of people completing non-formal education programs.	1,436
3. Number of participants reporting increased knowledge.	1,269
4. Number of participants adopting or increasing use of practices.	419
5. Number of participants in the High School Financial Planning program.	27
6. Number of participants in the Go for the Goal program.	245

7. Number of participants in the Financial Fitness for Youth program.	315
8. Number of participants in the Consumer Judging program.	301
9. Number of participants in the Money My Way program.	38
10. Number of volunteers working with youth resource management programs	54

Money 2000 for Housing Goals - There were 53 planned and 48 days reported in this project area equaling 0.2 FTE's with a total of 264 contacts.

1. Number of activities and programs conducted.	27
2. Number of people completing non-formal education programs.	210
3. Number of participants reporting increased knowledge.	194
4. Number of participants adopting or increasing use of practices.	128
5. Number who reduced debt, repaired credit, or saved money for a down payment or closing costs.	19
6. Number saving money for repair or remodeling costs.	19
7. Number planning or saving money for accessible housing or special needs, such as office, disability.	15
8. Number of consumers setting and attaining affordable housing goals—affordable alternatives, homebuyer education.	37

Textile Product Education for Youth - There were 280 planned and 391.5 days reported in this project area equaling 1.7 FTE's with a total of 3,652 contacts.

1. Number of activities and programs conducted.	228
2. Number of people completing non-formal education programs.	2,847
3. Number of participants reporting increased knowledge.	2,207
4. Number of participants adopting or increasing use of practices.	1,717
5. Number of volunteers working with youth.	449
6. Number of youth participating in textile and clothing classes and/or workshops.	1,547

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Leadership Training and Development

- a. There are many management systems used within the Cooperative Extension Service for collaboration. Some of these systems include Master Gardener Associations, Advisory Councils, Program Committees, Palmetto Leadership Classes, Landowners Associations, Keep America Beautiful Boards and Subcommittees, Family Community Leaders (FCL) Clubs and Associations, 4-H Clubs and 4-H Foundations. All management systems are used to collaborate on specific programs and projects of the Cooperative Extension Service. Volunteer training is offered to these systems by the Cooperative Extension

Service offices. Some of these trainings include: leadership development, orientation, goal establishment, meeting deadlines, measuring accomplishments, allocation of resources such as manpower, materials, money and time, and volunteer expectations.

At the state level, through the Volunteer Management Initiative Team, several strategies were implemented to use effective management systems for collaboration. Working relationships were re-established with the Governor's Office on Volunteerism and the South Carolina Association of Volunteer Administrators (SCAVA). A team member serves on the SCAVA Board.

The project team maintained a resource library. Information about the library was shared at the Volunteer Management inservice training.

b. Impact –

During the 2000-01 fiscal year, 636 days were planned in this project area. Five hundred seventeen days were actually reported which included 162 programs which 2,123 people completed. Of those completing the program, 87% (1,858) reported an increase in knowledge and 74% (1,608) reported that they adopted or increased the use of practices that were taught.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Leadership Training and Development

a. Reaching out to non-Extension volunteers opens opportunities for Cooperative Extension Service to become more visible in a community. It also offers an opportunity for non-Extension volunteers to become Extension volunteers.

A second program was designed to increase the knowledge of volunteer opportunities within the Extension System; to increase volunteer program successes within the system; and to utilize mass media to increase public awareness of Extension volunteer programs.

b. Impact –

During the 2000-2001 fiscal year, 364 days were planned in this project area. Five hundred and five days were actually reported with 193 programs conducted which 3,489 people completed. Of those completing the program, 93% (3,256) reported an increase in knowledge and 65% (2,283) reported that they adopted or increased the use of practices that were taught.

Four hundred forty five days were planned to increase the knowledge of volunteer opportunities. Four hundred forty three days were reported. There were 197 activities and programs conducted that reached 4,776 citizens. Approximately, 66% reported an increase in knowledge.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Leadership Training and Development

a. The purpose of this project was to implement an effective volunteer management system for FCL boards, committees and county organizations and to establish, revitalize and/or improve the cooperative relationship with FCL to expand the scope of its membership and programming efforts.

b. Impact –

There were 940 days planned in this area and 1,256 were reported. Seven hundred and sixty four activities/programs were conducted with 721 Family, Community Leader (FCL) volunteers conducting programs with other groups. This included 41,567 contacts made by the FCL volunteers.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. Living successfully in the information age requires that youth be knowledgeable and skilled in communicating their ideas and beliefs. This includes the ability to speak with poise and confidence in the public arena, effectively and efficiently communicate utilizing computer technology and through standard written formats. Extension 4-H programs provide opportunities for youth to become proficient in many communications modes. The opportunities exist through different delivery modes in order to reach a diverse audience of young South Carolina citizens. Competitive events are held which are designed to strengthen the skills of the 4-H participants:

- \$ Method Demonstrations in 4-H project areas
- \$ Public Speaking Contests
- \$ Livestock Judging Events with a “reasons” component
- \$ Consumer Judging Contest
- \$ Business Demonstration Contest

\$ Lifesmarts Contest - computer component

b. Impact –

In February 2000, a statewide training was conducted with 31 County Extension faculty who work with 4-H youth. The purpose was to train agents to assist youth in making oral presentations in the communications area. The training focused heavily on the linkage between gaining skills through 4-H project work and demonstrating that knowledge and skill through public speaking, demonstrations, judging contests and other competitive events.

4-H youth participating in various contests during the State Fair gave approximately 500,000 fair goers the opportunity to see what communications skills are developed through the 4-H program.

There were 163 days planned in this project with 180 days reported. A total of 513 white males, 652 white females, 819 black males, 972 black females, 6 other males, 11 other females and 229 limited resource youth were contacted through this project area. There were a total of 79 activities and programs conducted in this project area with 1,301 youth completing these programs. Of those youth participating, 1,228 reported an increase in knowledge, 275 reported adopting or increasing uses of practices, and 846 reported they plan to adopt new practices. The 4-H debating contest had 251 participants while 43 participated in public speaking contests with a total of 14 participating in Business Demonstration Contest.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. South Carolina agencies continue to join together to address the serious problem of home fire related injuries and deaths involving children. Agencies working through 4-H to address these issues are South Carolina Fire Marshall's Office, South Carolina Firemen's Association, South Carolina Farm Bureau, and South Carolina Department of Health and Environmental Control. A comprehensive approach is needed in order to reach the maximum number of families with fire safety training. The 4-H program in collaboration with other agencies has developed and continues to educate youth in fire prevention and safety. The fire safety curriculum spans K-5 and is provided as school enrichment programs to public and private schools. In support of the curriculum, a fire safety poster contest and creative writing contest are sponsored on the state level.

In addition, strong emphasis is needed on developing an awareness in youth of the relationship between sound nutrition and physical exercise. Healthy practices related to sound nutrition and physical exercise are often misunderstood or simply not practiced by even those youth who participate in organized athletic activities. In nutrition and fitness, the 4-H program offers instruction in workshops, seminars, school enrichment and camping.

- b. Impact –
There were 626 days planned with 729 days reported for this project. A total of 3,251 white males, 4,217 white females, 4,246 black males, 5,404 black females, 75 other males, 91 other females, and 6,159 limited resource youth were contacted through this project. There were 427 activities and programs conducted in this project with 12,749 youth completing these non-formal education programs, 9,887 of these youth reported an increase in knowledge with 3,391 youth reported adopting or increasing uses of practices. There were also 4,345 youth completing a program on Healthy Lifestyles who plan to adopt recommended practices. In addition, 3,377 youth participated in health projects, and 299,387 youth participated in Safety projects. A total of 584 volunteer hours were also reported.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Youth Development/4-H

- a. Youth are faced each day with making choices, some of which could impact their lives forever. They face the challenge of balancing their desire and ability to make healthy decisions with the desire to feel part of a group. Without the skills and confidence to make appropriate decisions, youth often make poor choices about important issues.

The 4-H Program provides a variety of programs, events and activities designed to increase the ability of youth to make wise decisions. In addition, the program provides opportunities for youth to serve as partners in planning, implementing and evaluating the overall program. They are seen as partners in the program, not as recipients of the program

- b. Impacts –
There were 840.5 days planned and 1,361 reported for this project. A total of 5,475 white males, 5,289 white females, 4,230 black males, 4,997 black females, 121 other males, 95 other females and including 1,507 limited resource youth were contacted through the efforts made in this project. There were also 580 programs conducted with 12,062 youth completing these non-formal educational programs. Of those youth completing the

programs, 7,251 youth participants reporting an increase in knowledge and 12,607 youth reported adopting or increasing the use of practices with an additional 5,621 youth who plan to adopt recommended practices. In addition, 702 volunteers were involved in this project area and reported 6,782 hours of volunteer time.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. Society has undergone dramatic changes that have affected youth and families. Strong families provide children with a sense of belonging and the security of being loved and nurtured. Children from families without this strength and security often are at risk. The 4-H program does not seek to replace the influence and purpose of the family unit. It offers youth the opportunity to become a part of an organization where knowledge and skills can be developed for life-time learning. The 4-H program seeks to support the family unit and strengthen the individual child, building upon the assets that are present. County Extension Agents receiving training through the Building Family Strengths Program utilize their training to reach and help individual youth and their families.

- b. Impact –
There were 243 days planned for this project and 233.5 days reported. A total of 409 white males, 631 white females, 636 black males, 966 black females, 6 other males, 12 other females and 281 limited resource youth were contacted through efforts made in this project area. A total of 21 volunteers were also reported as participating in this project area. There were 101 programs and activities conducted with 1,940 youth completing non-formal educational programs. Of those youth participating, 1,792 reporting an increase in knowledge while 242 adopting or increasing uses of practices. There were 100 youth participating in Conflict Resolutions programs.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. Teaching youth about plants and animals is much more than teaching them to appreciate life. Lifelong hobbies and careers develop over the course of a 4-H plant/animal experience. The value of discovering a hobby that is truly cherished and brings lifelong satisfaction coupled with the development of skills and conservation practices, makes this project very significant.

b. Impact –

There were 1,386 days planned and 1,836.5 reported for this project area. A total of 21,690 white males, 18,788 white females, 7,322 black males, 7,226 black females, 249 other males, 203 other females and including 2,665 limited resource youth were contacted through efforts made in this project area. A total of 1176 volunteers participated in this project area. There were 921 activities and programs conducted with 23,377 youth completing these non-formal education programs. Of those youth completing the programs 15,947 youth reported increased knowledge while 4,978 youth reported adopting or increasing uses of practices. An additional 3,377 youth completing programs in plant/animal science indicated they plan to adopt recommended practices. A total of 6,970 youth participated in 4-H animal projects while 6,789 youth participated in plant projects.

c. Source of Federal Funds – Smith Lever 3b&c

d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. American culture has undergone dramatic changes over the past few decades. From an agrarian society with interdependent families, we've become a culture of neighborhoods of strangers. The breakdown of the family unit is also evidenced in the breakdown of community. Youth have little understanding of the responsibilities of citizenship yet know much about their rights. The 4-H program is focused on teaching the responsibilities of American citizenship. A ceremony is held during State 4-H Congress recognizing youth that have reached their eighteen birthday and are eligible to vote. State service projects were conducted to benefit children in crisis. Four-H youth from across South Carolina conducted two major service projects. They collected 5,000 pairs of new shoes for Romanian orphans and collected books and bears that were distributed to children in shelters and hospitals across the state. Local club and county 4-H programs offered numerous opportunities to help others. Four 4-H members attended the National 4-H Conference in Washington, DC to provide input and vision for the 4-H program of the future. The State 4-H Council visited with the governor and was introduced from the South Carolina Senate and House of Representatives.

b. Impact –

There were 325 days planned and 207.5 days reported in this project area. A total of 3,318 white males, 2,667 white females, 1,354 black males, 1,495 black females, 77 other males, 39 other females and included 70 limited resource youth were contacted through efforts in this project area. There were 134 programs conducted with a total of 4,747 youth completing these non-formal education programs. Of those youth who completed the programs, 3,960 youth reported an increase in knowledge with 1,449 of these youth reported adopting or increasing uses of practices. There were also 2,394 completing programs in Citizenship who plan to adopt recommended practices. In addition there were 1,046 who completed public policy education programs, 2,198 youth participated in service learning, and 1,741 youth who gave leadership to service learning projects. A total of 2,364 volunteer hours were reported in this project area.

- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Youth Development/4-H

a. Children and youth lack a working knowledge of environmental stewardship. Many have no experience in the natural environment or in outdoor recreation activities. The 4-H program seeks to create an awareness of the natural environment. Included in the program emphasis is the understanding of individual and personal responsibility by every citizen to maintain the natural resources and to develop life skills through outdoor recreation activities.

b. Impact –

There were 604 days planned and 659.5 reported in this project area. A total of 6,539 white males, 6,210 white females, 3,512 black males, 3,391 black females, 44 other males, 36 other females and including 1005 limited resource youth were contacted through efforts made in this project area. There were also 472 reported as volunteers. There were a total of 414 activities and programs conducted with 11,576 completing non-formal education programs. Of those youth who completed the programs, 9,197 reported increase in knowledge and 2,733 adopting or increasing uses of practices. An additional 2,303 plan to adopt recommended practices. In addition there were 1,712 youth reported in county environmental programs, 1,667 who participated in shooting sports clubs, 750 youth trained in hunter safety, and 1,450 participated in adventure activities.

- b. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact -- State

Key Theme – Youth Development/4-H

- a. Youth live in a world where technology rapidly changes and becomes obsolete. Acquiring a basic understanding of electrical and mechanical science is vital to understanding the world around them. Having computer science skills has become a necessity for productive life in the world of work.

Safety skills in all walks of life are often taken for granted during the adolescent years. Vehicle safety is of grave concern during the adolescent years.

The South Carolina 4-H Energy Challenge, with support from SCANA Corporation, Duke Power Company, Inc., and Carolina Power and Light Company, continues to provide an opportunity for South Carolina students to learn about the world of energy. In addition, 4-H youth are actively engaged in electric, computer science, and safety programs.

- b. Impact –
There were 497 days planned and 510.0 days reported in this project area. A total of 2,221 white males, 2,132 white females, 2,047 black males, 2,046 black females, 26 other males, 19 other females and including 1,341 limited resource youth were contacted through efforts made in this project area. There were 235 activities and programs conducted with 3,892 youth who completed these non-formal education programs. Of these youth who completed the programs 3,300 youth reported increase knowledge and 320 youth reported adopting or increasing uses of practices. There were also 1,182 youth who completed programs and plan to adopt the recommended practices. In addition, there were 238 youth enrolled in county energy programs and 124 youth and adults in county computer science programs. A total of 199 volunteers were reported who donated 929 hours to this project area.
- c. Source of Federal Funds – Smith Lever 3b&c
- d. Scope of Impact – State

Key Theme – Youth Development/4-H

- a. Some children never have the opportunity to explore the natural world around them. Experiencing the environment is often done through textbooks and other formal educational methods. Taking kids into the natural world to explore resources is the best way to teach them about the environment. Experiential learning is the hallmark of all 4-H programs and Teaching KATE (Kids About The Environment) is no exception.

b. Impact –

There were 203 days planned and 175.5 days reported for this project area. A total of 463 white males, 1,914 white females, 179 black males, 295 black females, 3 other males, and 6 other females were contacted through this program area. There were 38 activities and programs conducted with 2,059 completing non-formal education programs. Of those youth who completed the programs 967 youth reported increase in knowledge and 94 youth reported adopting or increasing uses of practices. There were also 1,318 who plan to adopt recommended practices. In addition, 368 people were reached in promotion effort of Teaching KATE, 32 teachers took formal courses on Teaching KATE, and 100 teachers received Teaching KATE lesson plans.

c. Source of Federal Funds – Smith Lever 3b&c

c. Scope of Impact – State

B. STAKEHOLDER INPUT PROCESS

Section 102(c) of the AREERA Act of 1998 requires that land grant institutions provide information related to stakeholder input. The Act specifies that information on 1) actions taken to seek stakeholder input that encourages their participation and 2) a statement of process used by institutions to identify individuals and groups who are stakeholders and to collect input from them.

At Clemson University, stakeholder input is a key to successful extension programs. Clemson has a long history and tradition of seeking stakeholder input into the plan of work process. The process involved in seeking stakeholder input include the following steps: 1) identification of stakeholders--internal and external that should have input in the POW process, 2) process used in seeking stakeholder input, 3) POW questions for stakeholders, and 4) profile of external stakeholders.

Identification of Stakeholders--Internal and External:

Internal: Internal stakeholders include Extension administrators, program administrators, county Extension directors, Extension agents, agent associations, specialists, faculty, department chairs, school directors, and faculty and administrators from Experiment Stations (Research).

External: Extension advisory boards, commodity groups, community leaders, human service providers, business/industry, and collaborators such as Farm Bureau, Chamber of Commerce, Farm Service Agencies, etc.

Process Used to Seek Stakeholder Input and Questions

Nominal group technique (NGT) was used to garner stakeholder input to the POW process. NGT is a process where a group of individuals generate a large number of ideas in a relatively short period of time. NGT is helpful in identifying problems, exploring solutions and establishing priorities.

Several steps were involved in conducting the NGT. First, each of the 46 South Carolina counties was asked to conduct a NGT. Second, instructions were provided to all county offices/county directors of the steps involved in conducting the NGT. Third, to assure diversity, emphasis was placed on obtaining a cross-section of people that represent the local community. Fourth, a set of rules and procedures were established for smooth conduct of

NGT. Fifth, a series of questions were identified to which stakeholders were to respond. These questions included: 1) What are the five most critical issues facing your communities in the next five years? 2) Is Extension addressing any of these issues? and 3) What partnerships do you think might be formed with Extension to address the issues or concerns? The responses to these questions were summarized by county, by cluster and by state as a whole. The initiatives and projects that were developed for the state plan of work are a result of this process which were later included in the strategic goals of Public Service and Agriculture (PSA) in South Carolina.

Profile of Stakeholders

Of all the external stakeholders, Extension advisory boards play a significant role in the POW. Extension advisory board members constantly provide input to Cooperative Extension in South Carolina. A profile of advisory board members would help address the diversity issue. Of the 237 advisory board members who provided input, 48% were male, 52% female;

81% Caucasian, 15% African-American, and 4% other. Regarding age, 5% were less than 35 years of age, 46% between ages 36 and 55 years, and 49% more than 55 years. Eighty-four percent were married and living with a partner. Regarding education, 15% had completed high school, 18% some college, 35% were college graduates, while the remaining 32% held masters or professional degrees.

A study conducted by Dukes (1999) on the Expectations of Public Service at Land Grant Institutions for the 21st Century by traditional and non-traditional audiences in South Carolina found that important issues facing communities in South Carolina are: 1) growth and population, environment, community and economic development, agriculture productivity, family issues, and food, health and nutrition.

C. PROGRAM REVIEW PROCESS

There have been no significant changes in the program review processes since the 5-Year Plan of Work was submitted in July, 1999.

D. EVALUATION OF THE SUCCESS OF MULTI AND JOINT ACTIVITIES

South Carolina participates in a variety of multistate, multi-institutional/organizational, and multidisciplinary activities. Several of these activities involve positions that are partially funded by South Carolina Extension funds but are located in other states within the southern region. The activities that are reported below are those activities for which South Carolina provided primary leadership.

Market Risk Management

The multi-state educational programs on risk management tools and products available for use by primary producers and agribusinesses were:

Eight multi-state workshops on tactical market risk management procedures with a focus on the current agricultural environment.

A regional (VA, NC, SC, GA, and FL), in-depth training on market risk management was developed and offered to agricultural producers, lenders and other agribusinesses under the auspices of the *Executive Marketing School*. The intent was to offer in-depth training to producers. This project involved significant planning, materials development, promotion, and utilization of the SE Region's Agricultural Economists

Farm Safety & Health

Farm Safety & Health program highlights include: Completion of a joint program between Clemson University, SC State University, and University of Kentucky for farm safety issues and to develop future collaborative efforts in ROPS programs; development and utilization of a tractor rollover demonstration kit; publication of internet based farm safety newsletter;

active participation in Progressive Farmer Farm Safety Day Camps; continued interaction with the farm safety & health advisory board; minority farmer focus group participant with SC State University on safety issues; service on a Center for Disease Control Review Panel, water safety demonstrations, prevention of hearing loss workshops, lawn safety training for youth; SMV and emergency lighting focused programs, and high school targeted farm and outdoor safety educational events. The Farm Safety & Health project had 1353 youth participants.

Natural Resources Management

Team members used presentations, workshops, short courses and hands-on programs to promote wise use of natural resources in the context of tourism. A 4-day Southeastern Equestrian Trails Conference was held at Clemson. This conference had 163 attendees from 25 states.

Master Tree Farmer/Master Woodland Owner

The Master Tree Farmer/Master Woodland Owner program provides intensive forestry and wildlife training to landowners in return for 25 hours of volunteer time promoting forestry and the Tree Farm program in South Carolina. In 2000 - 2001 Master Tree Farmer continued as a flagship program for Extension Forest Resources. In Spring of 2001 the program was broadcast from Clemson University via videoconference to 14 states and 132 down-link sites across the south and to 4 states in the fall. Graduates received a total of 28 contact hours of instruction in forestry topics such as Forestry as an Investment, Pine Management, Hardwood Management, Marketing and Harvesting, and Wildlife Management. By using the video conference technology, the program was delivered to 2875 forest landowners in 2001. Landowners representing 748,277 acres of forest land completed the course. Approximately 47 % of the landowners were under 50 years of age and 20 % were female. The Master Tree Farmer Program utilized 21 volunteers. The number of FTE's devoted to this project was 0.6. The following impacts were derived from analysis of evaluation data collected after landowners completed the training:

1. Ninety-eight percent of the participants would recommend the program to other landowners.
2. Ninety-three percent feel that the program will save them money when practicing forestry on their property.
3. Ninety-four percent of the landowners report that they will earn money by using knowledge they gained from the program for an estimated total gain of \$16 million.
4. Based on increased knowledge, eighty-eight percent of the landowners completing the course plan changes in the management of their forest property.
5. Eighty-eight percent of the graduates indicated that they would attend a more advanced training program if it were offered.

Fire Ant Research & Extension Program

Participants/Collaborators: Principal Investigator -- Dr. Paul M. Horton, Clemson University, Clemson, South Carolina.

Other states and agencies include: USDA/ARS/CMAVE, Gainesville, Florida; USEPA,OPP/BPPD, Arlington, VA; US Army Environmental Center, Aberdeen, MD; US Army Center for Health Prevention and Preventative Medicine, Aberdeen, MD; TRADOC, Ft. Monroe, VA; SCARNG Environmental Office, Columbia, SC; Pest Management Office, Fort Jackson, SC; Texas Agricultural Experiment Station and Texas Agricultural Extension Service, Texas A & M University System; The University of Georgia Cooperative Extension Service, Athens, GA; LSU Agricultural Center, Baton Rouge, LA; University of Arkansas Cooperative Extension Service; University of Tennessee Agricultural Extension Service; Alabama Cooperative Extension Service, Auburn University; Pest Control and Urban Entomology, University of Florida, Gainesville, FL.

Statement of Problem Prompting Research Initiative: The imported fire ant (IFA) is a non-native, invasive, insect species having no naturally occurring enemies or control agents in North America. It has become an important medical, social, agricultural and economic pest in every county in South Carolina. Current practical management technology is limited primarily to chemical control. Environmentally-friendly management decisions can only be made based upon sound knowledge of the economic, ecological, social, and biological components of this insect. The South Carolina Legislature specifically stated their intent for us to link the resources provided by their 1998 PSA funding with the USDA/ARS and the other states in the Southern Legislative Conference Imported Fire Ant Task Force Initiative (SLC TF), as full partners.

Accomplishments and Results to Date: In an SLC Cooperative project with USDA/ARS, IFA colonies located in two separate sites on the Clemson University campus were inoculated with *Thelohania solenopsae*, a protozoan microsporidia in the summer of 1998. These sites have been continually monitored to determine survivability and potential control of IFA by *Thelohania solenopsae*. Brazilian phorid flies, *Pseudacteon tricuspis* have been released in three widely separated sites. One test site is near Clemson and a second at Myrtle beach, SC. These tests are also to examine the survivability and control potential of these parasitoids on IFA, and to compare their effects with similar tests being installed in other southern IFA-infested states.

A pilot IFA-Integrated Pest Management program with funding from DoD, EPA and Industry was initiated as a model DoD IFA management scheme for use on other southern military bases. In this pilot two test sites were installed on Ft. Jackson, SC and McIntire ANG airbase in June, 2000 and have been monitored since then. This pilot is a fully integrated program which incorporates GIS/GPS mapping and the integrated use of selected chemical management techniques designed to supplement and enhance the release and establishment of the two biocontrol agents (*Thelohania* and *Triscupis*). As of October 2000, both the phorid flies and the microsporidian were found to have survived, reproduced and spread into new colonies locally on these two sites in the midland region of South Carolina. As a result of this

success this pilot is being used as a model for the establishment of even larger IFA Management programs on three other military installations in the southern US. The SC tests will continue to be monitored over the next several years.

More than 35 training programs and production meetings were held throughout the state to teach IFA management techniques to more than 1260 agents, farmers and homeowners. Twenty-five research/demonstration sites have also been installed.

The Clemson University IFA Team joined with the extension and research personnel of 9 other land grant universities in a project to develop and publish a comprehensive and up-to-date extension bulletin on IFA management in urban areas. The title of the publication is "Managing Imported Fire Ants in Urban Areas." More than 40,000 copies of this 18 page publication were printed and distributed during the past 12 months.

This project is providing guidance and coordination for the CU PSA-IFA Program being conducted by 15 other scientific teams. These efforts are developing customized management strategies, and will ultimately reduce IFA to levels below economic thresholds, provide greater protection and enhancement for native species throughout the ecosystem, reduce the use of harsher chemical strategies, and significantly reduce the IFA as a threat to South Carolinians.

E. MULTISTATE EXTENSION ACTIVITIES

Extension faculty and staff are currently involved in six multistate activities. The overall purpose of these programs is to foster interdepartmental, interdisciplinary, and intercampus communication and collaboration in the southern states. In addition, these programs will increase coordination and expansion of efforts in conducting educational programs throughout the southern region.

The Virtual Small Fruit Center is creating more visible and active focal points for stakeholders within and outside the university for research, Extension, and outreach activities related to small fruit production, handling, processing, marketing and consumption. South Carolina is partnering with the states of North Carolina and Georgia on this program.

The Regional Forestry Position is a liaison of the southern land-grant universities and the USDA Forest Service - Southern Region. The Forester is responsible for increasing coordination and regional level technology transfer, information dissemination, and educational activities. Working closely within the Extension System and the USDA Forest Service, the Forester identifies opportunities and works with natural resource professionals to address them. South Carolina is one of 13 southern state cooperating in this effort.

The Water Quality Position is increasing coordination and cooperation among EPA, state environmental agencies, USDA-CSREES, and Cooperative Extension. This position is also responsible for identifying and providing related Extension educational materials to EPA and others as appropriate and communicate research, and other educational needs of Extension audiences to EPA and other appropriate organizations. South Carolina is one of 8 participating states on this position.

The Orchard Floor Management program provides leadership and direction to orchard and vineyard floor management in South Carolina, North Carolina, and Georgia. Specifically the program is used to evaluate orchard and vineyard floor management programs and provide support to county faculty through publications, field days, on-farm demonstrations, and inservice trainings.

South Carolina receives multistate input in the development of the yearly Pest Management Handbook. Specialists from Georgia and North Carolina provide current pesticide information for various sections of the handbook.

South Carolina is an active partner in the Southern Legislative Conference Imported Fire Ant (IFA) Extension/Research Program. This effort between federal, regional, state, and private sectors is essential to ensure that current and emerging IFA management technologies are effectively evaluated for regional effectiveness, and rapidly implemented where appropriate.

This is especially important with candidate biological control agents whose survivorship and impact may be influenced by the climate, soils, topography, and native fauna/flora which vary widely throughout the southeast region.

The Environmental Housing Issues Affecting the South program which was proposed for 2001, was not developed due to the lack of subject matter specialist support for this area.

F. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES

As required by the AREERA Act of 1998, Agriculture and Forestry Research Program and the Cooperative Extension Service at Clemson University have integrated their efforts to foster knowledge development and transfer for the citizens of South Carolina. The process of involving the integration of research and Extension efforts are as follows:

A critical element for successful integration efforts is the joint appointment of faculty in both research and Extension. This is done both at the administrative and specialist levels. For example, the Dean and the Director of Research has a 25% Extension appointment, while the Dean and Director of Extension has a 25% research appointment. Similarly all assistant directors have joint appointments in both research and Extension. These assistant directors coordinate research and Extension programs. These joint appointments provide the foundation for a strong working relationship and better understanding of the process involved in research-Extension integration. To accomplish the five GPRA goals in FY 2001, 16 initiative teams were utilized. Each team had faculty and staff drawn both from research and Extension.

A marketing program is being initiated with the support of both research and Extension to provide publicity for our joint programs and activities. In addition, programs are jointly conducted by both research and Extension faculty at our Research and Education Centers. Each center has a specific program focus where both research and Extension faculty collectively work together to identify problems, develop solutions to address the problems and then develop a mechanism to transfer appropriate solutions and/or recommendations to the citizens of the state.

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

Institution Clemson University

State South Carolina

Check one: Multistate Extension Activities
 Integrated Activities (Hatch Act Funds)
 Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
<u>Enhancement of Applied Research and Extension Activities</u>	<u>\$433,517</u>	<u>\$401,595</u>	<u>\$428,565</u>	<u>\$439,279</u>	<u>\$450,261</u>
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Total	<u>\$433,517</u>	<u>\$401,595</u>	<u>\$428,565</u>	<u>\$439,279</u>	<u>\$450,261</u>

Form CSREES-REPT (2/00)

Director

Date

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