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N. C. COOPERATIVE EXTENSION SERVICE

FEDERAL ACCOMPLISHMENT REPORT

1996

North Carolina Cooperative Extension Service

NORTH CAROLINA STATE UNIVERSITY
NORTH CAROLINA A&T STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION SERVICE

ANNUAL FEDERAL REPORT 1996

Program Overview

The North Carolina Cooperative Extension Service provides educational programs to help North Carolinians improve the quality of their lives. North Carolina State University and North Carolina A & T State University deliver a coordinated Extension educational program available to all people in North Carolina.

This annual report represents the cumulative results of five years of Extension educational programs from 1992 to 1996. The accomplishments indicated in this report reflect some of the impacts that Extension programs are having on the people of North Carolina. These results are the end products of educational programs coordinated by the two cooperating land-grant universities in each of the state's 100 counties and the Cherokee Reservation. The programs are supported through the cooperation of county, state and Federal governments, and a wide variety of organizations, groups, and individuals.

Extension's educational programs were planned and implemented in collaboration with thousands of the state's citizens. These programs reach all areas of the state, and a vast proportion of the state's population. The programs were evaluated to assess the resulting contributions to a profitable and sustainable agriculture; a protected and enhanced environment; stable communities; responsible youth; and strengthened families. The cumulative information that is reflected in the reported accomplishments demonstrates a part of the scope and quality of Extension's programs for the benefits of the state's citizens.

At the beginning of calendar year 1996, The North Carolina Cooperative Extension Service initiated its "Foundations For the Future" long range plan. The plan consists of twenty State Major Plans, and within the construct of Extension's mission, addresses priority needs of the state's citizens. Those State Major Plans include the educational emphases indicated in this report. Accomplishments from this new program plan are now beginning to accrue, and those results will be reported in subsequent accomplishment reports.

HIGHLIGHTS OF NATIONAL INITIATIVES

FOOD SAFETY AND QUALITY

North Carolina's Food Safety and Quality Initiative was chosen by 28 counties (28%) as a major program. The remaining 72 counties were engaged in food safety and quality programming at various levels. The initiative has been addressed by multi-disciplinary teams at both state and county levels. Some groups received targeted information such as food service employees, day care providers, livestock and dairy producers, poultry producers, occasional quantity food preparers, populations at greater risk for food borne disease, home food preparers, commercial and private pesticide applicators, Senior Nutrition Site food service personnel, the commercial seafood industry, food bank employees and other groups seeking food safety information. Other programs were directed toward the general consumer food handler. Programs reached all ages, sexes, income levels and an ethnically diverse audiences. Over 43,300 individuals actively participated in food safety programs in 1996.

Programming continues to be offered in a variety of settings to reach the intended audiences. Clientele were reached in schools, day care centers, youth alternative classrooms, youth clubs, Senior Nutrition sites, processing plants, work-site wellness programs, animal production facilities, after-school programs and in distance education settings. Other groups were assembled in workshops conducted in the community, at subsidized housing sites, at professional conferences, and at certification programs. Continuing education credits and certification programs were approved for programs delivered to pesticide applicators, food services employees and day care personnel.

A variety of educational methods were used to reach clientele. A wide range of mass media assisted in providing timely information at teachable moments such as following a foodborne illness outbreak, after a natural disaster or other events requiring special handling of food products. The Extension Crisis Management Plan was in place to respond to food safety concerns such as cysclospora, meat safety and other crisis. Videos of the Safe Food, Healthy Children satellite presentation were used with child care personnel. The Food Safety and Quality Science Fellows program worked with 20 youth in the week-long program involving university faculty and food industry representatives.

Extension is a major provider of food safety training for food service personnel. Approximately one-third of the Family and Consumer Science agents are certified to teach the ServSafe foodhandler course. Agents worked with their local health departments to certify food service employees at the local level. Food product

entrepreneurs were assisted in product safety evaluation product formulations, labeling and business procedures for starting food related businesses. HACCP procedures were presented in programs for food processors, food service employees, day care providers, Nutrition site managers, Home Health Care and Hospice workers. Special topic classes were provided areas such as IPM practices and food production safety, seasonal food preservation, food laws and regulations; meat, poultry and seafood handling, and animal and pharmaceuticals and animal product food safety. Information located on the WWW such as food safety information and The Complete Guide to Home Canning were valuable resources.

The major focus of the Food Safety and Quality Initiative continues to be safety education for food producers, food processors, food handlers, educators, nutrition and health professionals, and consumers. Programs like ServSafe, HACCP, and safe quantity food preparation continue to expand to additional audiences.

PLIGHT OF YOUNG CHILDREN

The North Carolina Cooperative Extension Service continues to work to improve the lives of its youngest citizens. Agents in many counties are leaders in securing and implementing the statewide governor's multi-million dollar initiative program called Smart Start. Agents also work with Headstart and WIC clients in the areas of parent education and nutrition. Most recently several NC counties have been involved in the Out For Lunch Program for food stamp recipients, an innovative program targeting mothers receiving Food Stamps. Mothers are given education on food buying, budgets, etc as well as their preschoolers are involved in nutrition programming. Agents continue to train volunteers, teachers, day care workers and parents in food safety, meal planning, nutrition and child development.

Agents continue to be the catalyst for building coalitions with other agencies such as AFDC, WIC, JOBS, civic groups and others to reach parents with children 0-5 with needed information on nutrition, immunization, and money management. Several counties have the Hey What's Cooking program designed to reach out to pregnant, and parenting teens to help them learn about good nutrition for themselves and their baby.

With North Carolina's computer technology expansion at the county level, agents are utilizing the National Extension Children, Youth and Family Network to address issues related to child-care, health and family resiliency.

DECISIONS FOR HEALTH

In North Carolina, thirty-one County Extension Centers electing the State Major Program in Health and Human Safety and nineteen Extension Centers involved externally funded special projects in health and safety conducted activities reported under the Decisions For Health Initiative. Much of the day to day health and safety programs continues to be reported through core programs particularly Food, Nutrition and Health and the farm Safety program. External funding for health and safety

programs also increased with over $500,000 originating in the counties and $843,201 at the state level. The Rural Health Program alone received $663,201 in support of the Southern Leadership Initiative on Cancer (SALIC, funded by NCI), the AgrAbility Program(USDA) and the FarmABILITY Project (Kate B. Reynolds Foundations).

The Southern Appalachia Leadership Initiative on Cancer (SALIC), a three step breast and cervical cancer educational intervention project, is in year 4 of the original 5 year agreement. Community action teams continue to be formed throughout SALIC counties and to engage in a variety of team initiated community cancer control activities.

The AgriAbility Project funded by CES-USDA, and the new FarmABILITY Project funded by Kate B. Reynolds Foundation have been combined into a single ABILITY Program. ABILITY expanded from 3 to 15 counties in eastern North Carolina in 1996.

County Extension Professionals continued to bring an array of health and safety programs to new and traditional extension audiences reaching over 322,000 individuals. Programs addressing health and safety ranged from farm safety to teen pregnancy prevention. Chronic disease prevention and control programs continue to proliferate primarily focusing on heart disease, stroke and cancer. Health fairs remain a vehicle for increasing awareness about the inverse relationship between chronic disease and healthy life styles. Farm safety programs including the development of a new curriculum aimed at helping parents protect children from farm related injuries. Bicycle Safety programs, sponsored by NCCES 4-H were held in several counties.

Extension Agents, independently and in collaboration with county leaders, have undertaken programs to prevent teenage pregnancy, to encourage healthy aging and to increase the availability of accessible housing for the aged and disabled. After six years under the auspices of NCCES, a number of counties initiated or renewed Extension sponsored Community Health Advocate Programs providing current and accurate information on health and health related topics.

Environmental health was addressed in the pesticide education programs and through the training aimed at encouraging the safe recycling of motor oils.

SUSTAINABLE AGRICULTURE

The College of Agriculture and Life Sciences Sustainable Agriculture Task Force, composed of faculty of the tow land grant institutions, federal and state agency staff, farmers and NGO representatives provides input, vision and leadership of the sustainable agriculture program in the college. This program effort resulted in the following outcomes: Forty four agents were trained in pertinent concepts of sustainable agriculture; 722 programs were presented and 487 sustainable agriculture demonstrations were established; 8,800 producers implemented one or more farming practices aimed to enhance sustainability; four project proposals were developed and submitted for USDA funding and 12 proposals were developed for non-USDA funding sources.

In addition, the following activities continued to strengthen our college's alliance with other groups and individuals interested in sustainable agriculture: the fourth sustainable ag forum was held to discuss relevant issues; a subgroup of the task force continues to give leadership to "Partners in Agriculture," a project involving seven partners that is a part of the Kellogg Integrated Farming Systems program; development of the Center for Environmental Farming Systems (partnership of the land grant institutions, North Carolina Department of Agriculture, NGO's and farmers) is continuing; the second NGO land grant summit was held in which faculty and administrators join NGO community representatives to enhance our understanding of collaborative roles in developing and delivering sustainable agriculture programs; partnering with the North Carolina SAWG and Carolina Farm Stewardship Association on programs and activities.

Several success stories provide insight to the difference that our sustainable agriculture program is making to individuals and communities. In one county, 40% more acres were planted using no-till concepts, resulting in reduced soil erosion. A dairy producer,working with Extension, implemented a management intensive grazing system which improved waste management and nutrient recycling, reduced pesticide applications and erosion, and improved profits by $13,000. On a trout farm, waste is recovered, processed and sold as a fertilizer source.

Extension assisted one county in the process of initiating a comprehensive land development plan. Commissioners were undecided about allocating $25,000 to a proposal to develop the plan. Extension educational programs conducted in 18 community locations provided an analysis of the planning options and to citizens the opportunity to give input. After receiving input from these meetings, the commissioners decided to allocate resources to develop the plan.

YOUTH AT RISK

The Youth-At-Risk Initiative was designed to develop support systems for youths who live in environments which may hinder or prevent them from becoming competent, coping, and contributing members of society.

The North Carolina Cooperative Extension Service through 4-H has provided leadership in building coalitions and designing educational programs for youths in high risk environments.
During the past five years, more than 500 coalitions worked to address youth-at-risk issues. Approximately 291 long-term coalitions worked to monitor the long-range goals. More than 16,660 volunteers donated over 44,000 days to the Youth-At-Risk Initiative. Over 2,191,700 of federal, 3,069,900 of state, 182,900 of local government, and 368,200 of private dollars were used to support youth-at-risk.

School-age child care programs were also used to support at-risk youths and families. Extension agents provided training for over 7,260 school-age child care workers. These workers provided care for nearly 92,228 youths. Youths in before and after

school child care participated in many Extension sponsored educational programs, including 4-H, home economics, and agriculture.

Over 2,540 adjudicated youths have reduced their involvement in the judicial system. Nearly 37,600 youths improved their academic performance as a result of Extension programs. Nearly 7,800 youths decreased their alcohol and other drug usage after participating in Extension programs. Career training and preparation have been provided to over 33,550 youths. Over 1,790 science and technology programs have been conducted. Nearly 3,430 youths improved their literacy skills as a result of Cooperative Extension programs.

COMMUNITIES IN ECONOMIC TRANSITION

North Carolina rural communities continue to be affected by the social, economic and environmental changes. Many policies and decisions that affect these communities are state or federally riven from different points of view and understanding of decisions on localized impacts. Community strategic planning is one of several methods amenable to collaboration that may be used to identify diversification, opportunities, deterrents to development and need for infrastructure improvements. Extension assisted 19 communities with strategic planning.

Entrepreneurial development is another key program to assist communities in transition. Reported accomplishments in entrepreneurial education continue to reflect reductions in FTE's t the state and areas level of the organization, Extension assisted 2901 new, current and potential entrepreneurs. Of these, 62 made informed decisions about a business start-up with estimates of over $1,240,000.

WATER QUALITY

During 1996 the swine industry has continued to expand in the state. Agency assistance has been utilized on the design and management of new waste treatment systems lagoons, waste utilization plans and the development of nutrient management plans. Producers have been educated in irrigation management to apply manure at proper rates and times.

Due in part to the lagoon spills of 1995, the North Carolina General Assembly passed legislation requiring certification of operators of animal waste systems. This certification involves a minimum of 6 hours of curriculum training , passing an exam and paying an annual $10 fee, A curriculum manual was developed with visuals. Over 6,000 producers have been trained.

HIGHLIGHTS OF 3 (d) and SPECIAL FEDERAL FUNDED PROGRAMS

EXPANDED FOOD & NUTRITION EDUCATION PROGRAM

In FY:96, the EFNEP program reached 8468 adults and 5420 youth in 40 North Carolina counties, through the efforts of 113 Nutrition Program Assistants and 1744 volunteers. Approximately 4000 adults completed the national nutrition education curriculum (ERIB) and demonstrated knowledge and behavior changes which contributed to healthier diets. There was a marked increase in group teaching and in cooperation with other agencies.

EFNEP also reached more than 1000 pregnant teenagers statewide, many of whom participated in the specialized curriculum "Hey, What's Cookin'" which increased food management skills and contributed to a healthy outcome of pregnancy. In one county which enrolled 21 pregnant teens, those who failed to meet desirable birth-weight standards were two young women who joined the class very late in their pregnancies. Given differences in costs between a healthy-weight ($4,720) and a low birth-weight or premature delivery ($11,670-$39,420), savings in medical bills for the 19 healthy-weight deliveries was a minimum of $7,000 per delivery (total $133,000).

An additional 1384 WIC participants in 10 counties received in-home breast-feeding education and support from specially trained EFNEP staff. This ES/WIC cooperative program helped new mothers to establish lactation successfully and to meet their breast-feeding goals. Because breast-fed babies are protected from many common diseases of infancy, it has been estimated that $29 million could be saved annually if all WIC mothers in the USA breast-fed their babies exclusively for the first month of life. In the 10 breast-feeding project counties in North Carolina in FY:96, over 70% of participants were still breast-feeding at four weeks postpartum.

The special programs which targeted pregnant teenagers and breast-feeding mothers were made possible through additional funding from national (ES-WIC Nutrition Education Initiative), state (the Governor's Smart Start program) and local sources (Health Departments).

FARM SAFETY

North Carolina agricultural workers, like those nationwide, suffer a large share of deaths, injuries, and illnesses compared to workers in other professions. These risks not only affect the agricultural workers, but also their families and communities. Buy providing needs based educational programs on agricultural safety and health, we can maintain agricultural productivity and enhance the safety and health of agricultural workers.

Through educational programs, 15,000 participants received information in farm safety

awareness and adoption of safe farming practices. In addition, the program responded to 4,500 requests for farm safety materials. Five thousand five hundred Extension customers adopted one or more safe farming practices. Five hundred farm workers and rescue and medical personnel increased their knowledge of farm accident rescue procedures. In addition, 19 students have enrolled in a course, "Agricultural and Environmental Safety and Health," a course that provides students the opportunity to explore various aspects of agriculture and the environment, with an emphasis on safety and health.

INTEGRATED PEST MANAGEMENT

IPM program were conducted in over 70 counties involving alfalfa, apples, Christmas trees, corn, cotton, Irish potatoes, greenhouse crops, pastures, peanuts, small grains, soybeans, tobacco, turf, urban horticulture, vegetables, beef, swine, and poultry.

Over 50 scouting schools and IPM training sessions were held with 3,500 growers, participating. IPM on-farm demonstrations were conducted in cooperation with 300 growers on 145,000 acres.

During the year, over 3,300 farmers initiated IPM practices. Two hundred eighty three consultants received IPM training. Two IPM programs were offered to over 250 people who are decision-makers working in urban areas. Almost 90% of the participants intended to implement IPM principles.

All peanut-growing areas use a leafspot forecasting model, resulting in 80% of the growers using the system to time fungicide applications. The program saves 1.5 to 2.5 applications per year, reducing pesticide application by 250,00 pounds and saving $2.5 million annually.

PESTICIDE APPLICATOR TRAINING

The Pesticide Applicator Training Program provides initial training and recertification training and education to private pesticide applicators (farmers) plus 14 categories of commercial applicators. During the year, 3,645 trainers received certification training and 5,580 received recertification training. Certification and recertification education were provided to 1,250 and 1,110 trainees, respectively. In addition, 5,000 people received pesticide application training related to urban gardening and IPM. Over 8,800 pesticide applicator trainees adopted improved pesticide-use practices.

During the 1994-96 time period, a pesticide container recycling program was developed with funding derived from pesticide registration fees. It is estimated that over 200,000 containers were recycled during 1996. Cooperative Extension and the North Carolina Department of Agriculture provides educational support for the program, which is now conducted in 67 counties.

PESTICIDE IMPACT ASSESSMENT

Continuing efforts to collect pesticide use information for crops important to the state. Information collected for resulting databases includes chemical and non-chemical pest management alternatives, percentage of acres treated with various strategies, application rates and frequency, methods and costs of application, and crop yield and quality effects of the alternatives. To date, the following production systems have been evaluated: sweet potatoes, cotton, tomatoes, poultry, potatoes, Christmas trees, and peanuts.

The database is used to provide supporting evidence on the efficiency of agrichemicals. A total of 180 data searches were conducted in 1992-1996; the information was used by Extension and research personnel to assist growers with pest management strategies. This information is provided in newsletters, educational displays, factsheets, workshops, and other publications.

RENEWABLE RESOURCES EXTENSION ACT

Extension efforts resulted in a Governor's conference and task force on the state of North Carolina forests. The task force recommendations provided a basis for collaboration for multiagencies and organizations. A significant outcome is the development of a Southern Center for Sustainable Forests which will emphasize the importance of continuing education of professional foresters, landowners. Current efforts in continuing education on RREA related issues for 1996 include over 26,912 hours.

Water quality issues continue. Use of forest lands as disposal sites for wast and continuing concerns regarding forest management in wetlands and coastal sites. Extension programs and efforts have educated over 400 landowners and professionals. A Coastal Zone Management Workshop will become the basis for consistent monitoring of forestry activities in the southeast.

Forest production educational programs continue to benefit the industry with economic returns to programs estimated at $14,000 per year for a lumber layout program alone.

Environmental education efforts continue with the development of additional materials for teachers in managing school yards, PLT, 4-H forestry and wildlife programs.

STATE MAJOR PROGRAMS

On January 1, 1996, the North Carolina Cooperative Extension Service embarked on its new four year plan which contains twenty State Major Programs. Major progress is being made in all State Major Programs. Annual accomplishments will be available at a later date when our computerized reporting system is fully operational. The programs and description which are being implemented at the county level by agents across the state are:

SMP 1 Aging With Gusto!

Program goals include helping older adults learn to achieve financial security and improve their health and self-care; helping family members and professionals provide better care for older adults; and promoting the need for affordable and accessible housing.

SMP 2 Agricultural and Natural Resources Policy

This program area emphasizes public policy issues but recognizes the need for both policy and technical dimensions in educational programs. It focuses upon improving the efficiency and effectiveness of agriculture and natural resources policy through a more informed public, a more informed decision-making body, and through increased citizen involvement in the policy making process.

SMP 3 Agriculture and the Environment

Educational programs will be developed and implemented to improve the understanding of the complex relationships between agriculture and the environment. The program will be targeted for specific clientele to assist them in environmentally managing water, waste, nutrients, pesticides, and petroleum products.

SMP 4 Animal Production and Marketing Systems

This program focuses on the animal production and marketing systems of the animal production sector of North Carolina's agriculture, as well as addressing public concerns associated with animal production systems.

SMP 5 Child Care

Program goals include helping child-care professionals provide safe, nurturing and appropriate programs for children and collaborating with other organizations to increase the amount of quality child care available. See Plight of Young Children accomplishments.

SMP 6 Community and Economic Development

Program goals include helping people-including those with limited resources-gain skills they need to participate in community development; helping community leaders implement policies that promote sustainable economic development; educating local leaders, business people and others about economic trends; and providing information about starting and running successful businesses.

SMP 7 Crop Production and Marketing Systems

This program addresses the educational needs of full-time, part-time, limited resource farmers, home gardeners, agribusiness, and non-farm citizens in the areas of production practices, marketing options, new technologies in crop production, environmental concerns, and governmental regulations.

SMP 8 Family and Consumer Economics

Program goals include helping consumers with limited resources develop plans to achieve financial goals; increasing consumers' knowledge of financial planning; helping people secure and maintain affordable housing; and helping them save money by properly caring for, maintaining and repairing goods.

SMP 9 Family and Parent Education

Program goals include helping parents understand, motivate, nurture and guide their children; helping limited-resource parents solve problems and reduce stress; helping parents learn critical thinking, conflict resolution and decision-making skills; and making parents aware of support services.

SMP 10 FOOD AND FOREST PRODUCTS MANUFACTURING

This program is to increase the competiveness and profitability of North Carolina's food and forest products industries, focusing on increasing the competiveness and profitability of those industries, as well as enhancing knowledge and skills of food processors for adopting new technologies, training workers, and implementing quality systems to ensure regulatory compliance, and for sustained growth and profitability in these industries.

SMP 11 Food Quality and Safety

Program goals include educating participants about ways to reduce the risk of food-borne illness and increasing people's knowledge of and confidence in the safety of the food supply.

SMP 12 Health and Human Safety

Program goals include helping people reduce health risks and take responsibility for health-related decisions; helping people make their home safer; helping farm workers and others understand work-related health and safety concerns and to adopt practices to reduce illnesses and injuries, and helping communities become better able to analyze and take action on health-related needs.

SMP 13 Leadership and Volunteer Development

Program goals include designing and managing Extension volunteer programs led by volunteers; and increasing citizens' and leaders' knowledge of and participation in public-policy decision making. Extension Homemakers are an active volunteer group in NC whom we program with our major issues.

SMP 14 Marketing and Production of Alternative Agricultural Opportunities and Enterprises

This educational program aim s at encouraging audiences to consider agriculturally based opportunities and enterprises in response to market signals. It uses an integrated team approach in the education of business oriented and limited resource farmers by assisting them in the discovery, analysis and pursuit of alternative agricultural opportunities

SMP 15 Natural Resource and Conservation Management

This educational program will focus on ecological awareness, natural resource decision making, forest and farmland stewardship, and fisheries and wildlife management.

SMP 16 Nutrition and Wellness

Program goals include informing people about proper nutrition; helping them reduce their risk of chronic diseases; helping women have healthier pregnancies; informing parents and child-care providers about the proper feeding of infants and children; and helping people with limited resources improve their diets.

SMP 17 Residential and Community Horticulture, Turf, Forestry, and Pest Management

This educational program will help target audiences adopt best management practices for residential and public facility pests. It will also educate target audiences on proper selection and management of plants for residential landscapes, including turf, edible plants, ornamental plants, and trees.

SMP 18 Residential and Community Water and Waste Management

Program goals include helping elected officials, well owners, environmental health specialists and homeowners improve the quality of surface water and groundwater, and helping elected officials, public-works professionals and homeowners evaluate waste-water management options, costs and regulations.

SMP 19 Resilient Youth, Families and Communities

Program goals include encouraging youths in high-risk environments to gain coping skills, make informed decisions and develop a sense of purpose and future; helping families learn to identify, cope with and solve problems; and working with community groups to create intervention and prevention programs that reduce risks to youths and families.

SMP 20 Youth Development

Program goals include helping young people, ages 5 to 19, learn to manage relationships, make decisions, become better communicators and serve their communities; helping them improve their academic performance; helping them understand how to choose and prepare for careers; and helping them learn to say "no" negative peer pressure, to define and establish aspirations, to communicate feelings, to prevent pregnancy, to resolve conflicts and to understand the consequences of their actions.

NORTH CAROLINA 1996 ANNUAL REPORT:
FOOD SAFETY AND QUALITY

NARRATIVE SUMMARY OF ACCOMPLISHMENT

North Carolina's Food Safety and Quality Initiative was chosen by 28 coun (28%) as a major program. The remaining 72 counties were engaged in food safety and quality programming at various levels. The initiative has been addressed by multidisciplinary teams at both state and county levels. So groups received targeted information such as foodservice employees, day c providers, livestock and dairy producers, poultry producers, occasional quantity food preparers, populations at greater risk for foodborne diseas home food preparers, commercial and private pesticide applicators, Senior Nutrition Site foodservice personnel, the commercial seafood industry, fo bank employees and other groups seeking food safety information. Other programs were directed toward the general consumer food handler. Program reached all ages, sexes, income levels and an ethnically diverse audience

Programming continues to be offered in a variety of settings to reach the intended audiences. Clientele were reached in school systems, day care facilities, youth alternative classrooms, youth clubs, Senior Nutrition s processing plants, worksite wellness programs, animal production facilitie after-school programs and in distance education settings. Other groups w assembled in workshops conducted in the community, at subsidized housing at professional conferences, and at certification programs. Continuing education credits and certification programs were approved for programs delivered to pesticide applicators, foodservice employees and day care personnel.

A variety of educational methods were used to reach clientele. Mass medi assisted in providing timely information at teachable moments such as fol a foodborne illness outbreak, after a natural disaster or other events requiring special handling of food products. Television, radio, newspape newsletters and distance education classrooms were used for wide distribut of information. The Extension Crisis Management Plan was in place to resp food safety concerns such as cyclospora, meat safety and other crisis nee Videos of the Safe Food, Healthy Children satellite presentation were use present food safety information to child care personnel. The Food Safety Quality Science Fellows program worked with 20 youth in the week-long pro of workshops, tours, and interaction with university faculty and food ind representatives. Print media, bulletins and fact sheets were developed t reinforce the food safety messages.

Extension is a major provider of food safety training for foodservice personnel. Approximately one-third of the Family and Consumer Science age are certified to teach the ServSafe foodhandler course. Agents worked wi their local health departments to certify foodservice employees at the lo level. Food product entrepreneurs were assisted in product safety evaluat product formulations, labeling, and business procedures for starting food related businesses. HACCP procedures were presented in programs for food processors, foodservice employees, day care providers, Nutrition site man Home Health Care and Hospice workers. Special topic classes were provide areas such as IPM practices and food production safety, seasonal food con food laws and regulations; meat, poultry and seafood handling, and animal

and pharmaceuticals and animal product food safety.

Materials and programs developed with Food Safety Initiative grants from I other states provided a sound basis for program delivery. Information lo on the WWW such as food safety information and The Complete Guide to Home Canning were valuable resources.

The major focus of the Food Safety and Quality Initiative continue to be safety education for food producers, food processors, food handlers, educa food, nutrition and health professionals, and consumers. Programs like ServSafe, HACCP, and safe quantity food preparation continue to expand to additional audiences.

SUCCESS STORIES

A. A Food Facility and Equipment Safety program was developed in coopera with a County School Board and County Fire Marshall Office. The targeted audience was school foodservice personnel and other foodservices that pro daily foodservice for institutional audiences. Over 144 particpants sho increased knowledge of food safety for the food handler. Of the 144 participants, 132 indicated they had adopted behaviors that made their fo production facility a safer work place. Ten schools improved or develope safety check list to be used daily in the food production facility.

B. County extension faculty in one county focused on reducing the use of pesticides, as well as teaching safe handling of pesticides. Approximate percent of private pesticide applicators who needed recertification were recertified. This number totaled over 200 applicators. Applicators rece training on pesticide safety, sprayer calibration, record keeping, and pesticide container recycling. Also, for commercial applicators there we several opportunities for recertification credits. One of these recertifications opportunities included a weed indification class. This offered indentification of 54 different weeds and their life cycles. Thi class was offered jointly by two counties. The class format was a hands- setting. Seventy-four participants provided positive feedback on how the assisted them in their work.

C. In response to child care workers expressed needs for food safety tra one county provided a "Food Safety for the Child Care Setting" workshop. Seventeen child care workers participated and all passed the post test.

D. A Seafood Safety workshop was provided for six high school's family a consumer sciences teachers or a total of 36 participants. The training c nutrition, and safety issues in perchasing, storage and preparation of seafoods. The teachers have a combined student load of 700 students. Th teachers received continuting education hours for certificate renewal.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Extension clientele will increase their adoption of recommended food handling practices.

INDICATOR 1

Enter the number of participants, and the percent of participants w their adoption of recommended practices. (Press F2 for explanation.

6yr Proj	75.0	31000

	Percent Increasing Adoption	Number of Program Participants
1992	75.0	2552
1993	75.0	9761
1994	75.0	6351
1995	75.0	10968
1996	75.0	11560
1997	0.0	0
Total		41192

Data Collection Methodology

The indicators for Food Safety and Quality programs include the col: of total participation data (from enrollment records) and assessmen impact on clientele. It is recommended that measurement of cliente impact be done on the basis of sampling at the state (vs. county) l minimize burden and standardize methods. Evaluation methodology an sample size should be determined for each program based on the characteristics of that program.

OBJECTIVE 2

Extension clientele will improve practices and processes that promote the production and protection of a food supply with minimal risk.

INDICATOR 1

Enter the number of program participants, and the percent of participants who increased their adoption of practices that protect the food supply. (Press F2 for explanation.)

6yr Proj	95.0	20000

	Percent Increasing Adoption	Number of Program Participants
1992	95.0	1673
1993	95.0	4728
1994	95.0	2022
1995	95.0	10605
1996	95.0	8760
1997	0.0	0
Total		27788

Data Collection Methodology

The indicators for Food Safety and Quality programs include the collection of total participation data (from enrollment records) and assessment of impact on clientele. It is recommended that measurement of clientele impact be done on the basis of sampling at the

state (vs. county) level to minimize burden and standardize methods. Evaluation methodology and sample size should be determined for each program based on the characteristics of that program.

OBJECTIVE 3

Extension clientele will improve their understanding of risks and responsible practices in relation to food and health.

INDICATOR 1

Enter the number of program participants, and percent of participants who increased their knowledge of food safety public policy issues. (Press F2 for explanation.)

	Percent Increasing Knowledge	Number of Program Participants
6yr Proj	95.0	20000
1992	95.0	87
1993	95.0	11867
1994	95.0	2556
1995	95.0	4837
1996	95.0	7300
1997	0.0	0
Total		26647

Data Collection Methodology

The indicators for Food Safety and Quality programs include the collection of total participation data (from enrollment records) and assessment of impact on clientele. It is recommended that measurement of clientele impact be done on the basis of sampling at the state (vs. county) level to minimize burden and standardize methods. Evaluation methodology and sample size should be determined for each program based on the characteristics of that program.

INDICATOR 2

Enter the number of program participants, and percent of program participants who increased their knowledge of the risks and benefits of specific food components, processing technologies or food production chemicals. (Press F2 for explanation.)

	Percent Increasing Knowledge	Number of Program Participants
6yr Proj	95.0	3400
1992	95.0	257
1993	95.0	2400
1994	95.0	6494
1995	95.0	16825
1996	95.0	15757
1997	0.0	0

Total	41733

Data Collection Methodology
The indicators for Food Safety and Quality programs include the collection of total participation data (from enrollment records) and assessment of impact on clientele. It is recommended that measurement of clientele impact be done on the basis of sampling at the state (vs. county) level to minimize burden and standardize methods. Evaluation methodology and sample size should be determined for each program based on the characteristics of that program.

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	575000
1993	575000
1994	575000
1995	575000
1996	500000
1997	500000
Total	3300000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	10.0	0.2	0.0	1.0	0.5	0.0
1993	10.0	0.2	0.0	1.0	0.5	0.0
1994	10.0	0.2	0.0	1.0	0.5	0.0
1995	10.0	0.2	0.0	1.0	0.5	0.0
1996	9.0	0.2	0.0	1.0	0.5	0.0
1997	9.0	0.2	0.0	1.0	0.5	0.0
Total	58.0	1.2	0.0	6.0	3.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	550
1993	550
1994	550
1995	550
1996	550
1997	550
Total	3300

ADDITIONAL COMMENTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
PLIGHT OF YOUNG CHILDREN

NARRATIVE SUMMARY OF ACCOMPLISHMENT

The North Carolina Cooperative Extension Service continues to work to imp the lives of its youngest citizens. Agents in many counties are leaders i securing and implementing the statewide governers multi-million dollar interactive program called Smart Start. Agents also work with Headstart a clients in the areas of parent education and nutrition. Most recently sev NC counties have been involved in the Out For Lunch Program for food stam recipients. An innovative program targeting mothers receiving Food Stamps Mothers are given education on food buying, budgets, etc. as well as thei preschoolers being involved in nutrition programming. Agents continue to volunteers, teachers, day care workers and parents in food safety, meal planning, nutrition and child development.

Agents continue to be the catalyst for building coalitions with other age such as AFDC, WIC, JOBS, civic groups and others to reach parents with ch 0-5 with needed information on nutrition, immunization, and money managem Several counties have the Hey What's Cooking program designed to reach ou pregnant and parenting teens to help them learn about good nutrition for themselves and their baby.

SUCCESS STORIES

Success Story #1

The T.E.A.C.H. Early Childhood Project offers the CDA program which targe child care providers who are 18 years of age and older who have a high sc equivalency, and have at least 480 hours of working with children and 120 of training over the past five years. This program offers scholarships t providers who enroll in training, reimbursement for substitute care when must be away to complete courses, and an incentive program for completion the CDA certificate program.

Cooperative Extension and Day Care Services Association developed a partn to combine scholarships with training delivery. Extension Agents offer l support and encouragement to move the provider through the application, training and assessment processes. The first year project located in 15 counties resulted in 30 trainees working toward their credential. In 199 additional 30 providers will be added in the expansion project in a total counties.

In 1996, the CDA Rural Scholarship collaborative arranged and facilitated workshops with 348 in total attendance. 694 state approved hours of trai were distributed to workshop participants in accordance with the NC Divis Child Development contact hour training requirements.

Success Story #2

The new "Work First" laws promise to impact upon many families, especiall single-parent families, in dramatic ways over the next two or more years. effort to prepare these individuals for the work force, various agencies educational facilities across the state are implementing training program

facilitate this transition. In Washington County, the Human Resource Development Department of Beaufort Community College are being utilized t address this need. In turn, the community college has contacted Extension assist in this effort.

In the first series of training sessions held in the county, there were t students selected for enrollment. Eight of these participants successfull completed the series. Four are now employed with three still in additiona training and one in the job search process.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 2

Extension, limited resource families, agencies (public and private), c providers, local organizations,and volunteers will collaborate to (a) gaps in programs and services for limited resource families with young children; (b) design and implement collaborative solutions; and (c) as their impact upon limited resource families and the community at large

INDICATOR 1

Enter the number of community action groups Extension assisted duri year in designing and implementing a plan to meet the needs of limi families with young children.

6yr Proj	235	155
	Community Groups Planning	Community Groups Implementing
1992	0	0
1993	0	0
1994	113	74
1995	120	78
1996	128	84
1997	0	0
Total	361	236

Data Collection Methodology

Records kept at the county level on the following:

- -community groups planning and implementing Plight of the Young Child Initiative
- -activities carried out as a result of community groups

INDICATOR 2

Enter the number of limited resource parents of young children and of young children (prenatal through age five) living in limited res families that were reached directly by Extension staff and voluntee

6yr Proj	9300	9800
	Parents Reached	Children In Families Reached
1992	0	0

1993	0	0
1994	4482	4841
1995	4625	4950
1996	5008	5385
1997	0	0
Total	14115	15176

Data Collection Methodology
Records kept at the county level on the following:
-number of families with young children reached through Extension programming or programs with Extension involvement
-volunteers trained

INDICATOR 3
Enter the number of trainers reaching limited resource families with children (e.g., agency personnel, religious leaders, child-care and service providers) whom Extension instructed.

6yr Proj	5000

	Number Service Providers
1992	0
1993	0
1994	2369
1995	2425
1996	26637
1997	0
Total	31431

Data Collection Methodology
Records kept at the county level on the following:

-Volunteers trained
-Service providers trained

When appropriate other data collections methods will be employed to evaluate specific programs.

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	0
1993	0
1994	0

Year	Amount
1995	0
1996	150000
1997	150000
Total	300000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0
1994	3.0	0.0	0.0	0.0	0.0	0.0
1995	3.0	0.0	0.0	0.0	0.0	0.0
1996	3.0	0.0	0.0	0.0	0.0	0.0
1997	3.0	0.0	0.0	0.0	0.0	0.0
Total	12.0	0.0	0.0	0.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	0
1993	0
1994	5
1995	7
1996	7
1997	7
Total	26

ADDITIONAL COMMENTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
DECISIONS FOR HEALTH

NARRATIVE SUMMARY OF ACCOMPLISHMENT

In North Carolina, thirty-one County Extension Centers electing the State Program in Health and Human Safety and nineteen Extension Centers involvec externally funded special projects in health and safety conducted activit: reported under the Decisions For Health Initiative. Since much of the da health and safety programs continues to be reported through core programs particularly Food, Nutrition and Health and the Farm Safety program, data presented here from these 50 counties (50% of total counties) represent o fraction of the health and safety related programming taking place within North Carolina Cooperative Extension Service in the 1996 reporting year. were twelve additional counties reporting under DFH in 1996 as compared t 1995.

External funding for health and safety programs also increased with over $500,000 originating in the counties and $843,201 at the state level The Rural Health Program alone received $663,201 in support of the Southe Leadership Initiative on Cancer (SALIC, funded by NCI), the AgrAbility Pr (USDA) and the FarmABILITY Project (Kate B. Reynolds Foundation).

The southern Appalachia Leadership Initiative on Cancer (SALIC), a three breast and cervical cancer educational intervention project, is in year 4 the original 5 year agreement. Community action teams continue to be form throughout SALIC counties and to engage in a variety of team initiated community cancer control activities. The second annual SALIC Summit prov an opportunity for community members to share program successes and recei further training in community capacity building and cancer control. In recognition of its success to date and the potential for obtaining additi impact data, it is highly likely that SALIC, along with the other three Applalachian Leadership Projects will be extended until at least 1999 at present funding levels.

The AgrAbility Project funded by CES-USDA, and the new FarmABILITY Projec funded by Kate B. Reynolds Foundation have been combined into a single AB Program staffed by the principal investigator Nolo Martinez and Garland (I Edwards, an engineer experienced in rehabilitation through assistive technology. ABILITY expanded from 3 to 15 counties in eastern North Caro in 1996.

County Extension professionals continued to bring an array of health and programs to new and traditional extension audiences. The 25 agency Orang County Immunization Coalition has prospered under the leadership of Famil Consumer Education Agent Alice Pettitt. State funding for an immunizatio coordinator is provided by the NC Governor's Smart Start program. In add Extension personnel have partnered with local agencies and advocates to increase age appropriate immunization rates in Ashe, Davie, Richmond and counties.

Other programs addressing health and safety ranged from farm safety to te pregnancy prevention. Chronic disease prevention and control programs co

to proliferate primarily focusing on heart disease, stroke and cancer. He fairs remain a vehicle for increasing awareness about the inverse relatio between chronic disease and healthy life styles. Farm safety programs in the development of a new curriculum aimed at helping parents protect chil from farm related injuries. Bicyle Safety programs, sponsored by NCCES 4- were held in several counties.

Extension Agents, independently and in collaboration with county leaders, undertaken programs to prevent teenage pregnancy, to encourage healthy ag and to increase the availability of accessible housing for the aged and disabled. After six years under the auspices of NCCES, a number of count initiated or renewed Extension sponsored Community Health Advocate Progra providing current and accurate information on health and health related t

Environmental health was addressed in the pesticide education programs an through the training aimed at encouraging the safe recyling of motor and oils.

SUCCESS STORIES

The most dramatic success story resulted from the broadcast of a public awareness broadcast in one of the North Carolina SALIC counties. Upon he the SALIC coordinator and volunteer discussing the importance of early detection of breast cancer, an older woman, aware of having a small brea lump, made an appointment for screening. She had a malignant tumor which removed sucessfully.

A second major success was the SALIC initiated breast cancer detection contnuing education program for physicians in the Appalachian counties se by SALIC. This program was a collaborative effort between the Bowman Gra School in Winston-Salem, NC and the SALIC coalitions. Unlike many such e to engage busy physicians in continuing education this program reached physicians.

The SALIC sponsored "Beyond Breast Cancer Celebration" attracted over 200 breast cancer survivors form the four SALIC North Carolina counties. Of 100 indicated a willingness to serve as community cancer control voluntee Fifty-seven underwent training for this purpose and are serving as member community action teams for the early detection of breast and cervical can

The North Carolina AgrAbility Project succeeded in compounding its potent for serving disabled farmers, farmworkers and their families by obtaining funding from a North Carolina based foundation to provide on site assisti technology to clientele. The two-year, $200,000 grant doubled the resour available to serve this population.

Extension leadership of, or participation in county immunization programs continues to be one of the successes in North Carolina. In addition to t leadership provided the 25 member coalition in Orange county, Extension personnel have partnered with local agencies in Ashe, Davie, Richmond and others to increase age appropriate immunization rates.

EXEMPLARY PROGRAMS

The Orange County Immunization Coalition continues to be one of the outst
Extension efforts to promote health and prevent disease.
Over twinty-five agencies and organizations have joined to support Extens
Leadership in working to increase age-appropriate immunizations.

SALIC also continues to be a leader in Extension health programming. SALI
organization of coalitions aimed at increasing the capacity of communitie
address their health needs is now being replicated by non-SALIC counties
The support and involvement of cancer survivors has increased the credib
and effectiveness of SALIC.

The FarmABILITY Project through its engineer staffed, onsite delivery of assistive technology is rapidly becoming an exemplary program in North Carolina.

SPECIAL FUNDS ABSTRACTS

In 1996 the North Carolina AgrAbility Partnership entered its third year. AgrAbility has now expanded into fifteen counties and increased its fundi over 100 percent through the addition of the FarmABILITY Project supporte the Kate B. Reynolds Foundation. FarmABILITY provides assistive technolo information and devices to disabled individuals engaged in agriculture. AgrAbility continues to provide direct educational and assessment service this population so as to empower individuals to work on their own behalf overcome deficits related to physical and other disabilities.

During FY 1996 the North Carolina Cooperative Extension Service accepted responsibility for the convening of the National Decisions For Health Net (NDHN), one of the five National Networks of the Children, Youth and Fami At Risk (CYFAR) Initiative. NDHN programs are supported by eight inter-university work groups representing 22 land grant universities. The supports and empowers children, youth and families at risk as they make decisions about health, safety, health care and other health related issu

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

People will adopt healthy life styles and reduce risk behaviors by tak responsibility for their health decisions.

INDICATOR 1

Enter the number of people reached directly and indirectly about ad healthy life styles and reducing risk behaviors. Then of the numbe reached directly, enter the number who adopted a healthier life sty reduced a specific risk behavior.

6yr Proj	800000	0	0

	Number Reached Directly	Number Reached Indirectly	# Reached Directly Adopting
1992	0	0	0
1993	0	0	0
1994	79141	0	0
1995	160381	0	0

1996	211000	0	0
1997	0	0	0
Total	450522	0	0

Data Collection Methodology

Extension County Accomplishment Reports, Southern Appalachia Leader
Initiative on Cancer (SALIC) and AgrAbility/FarmAbility monthly rep

OBJECTIVE 2

Individuals will make informed use of available health-related service
facilities. Extension, agencies (public and private), community group
care providers, and volunteers will partner to improve the availabilit
existing health-related services and facilities.

INDICATOR 1

Enter the number of people reached directly who have learned (a) ab
available health related services and facilities and how to use the
to make informed decisions about health care.

6yr Proj	165000	55000
	(a) Learned About Services	(b) Learned To Make Decisions
1992	0	0
1993	0	0
1994	65000	0
1995	85000	55000
1996	111000	72000
1997	0	0
Total	261000	127000

Data Collection Methodology

Extension Annual County Accomplishment Reports, SALIC and AgrAbility/FarmAbility monthly reports.

INDICATOR 2

Enter the number of counties in which Extension participated in an
campaign and the percent of children in these counties who were imm
age two.

6yr Proj	80	0.0
	Counties Partipated	Percent Children Immunized
1992	0	0.0
1993	0	0.0
1994	80	0.0
1995	0	0.0
1996	55	0.0

1997	0	0.0
Total	135	

Data Collection Methodology

INDICATOR 3

Enter the number of counties in which Extension collaborated to imp availability of existing health-related services and facilities oth those related to immunization of young children.

	Counties Collaborated
6yr Proj	19
1992	0
1993	0
1994	19
1995	0
1996	75
1997	0
Total	94

Data Collection Methodology

OBJECTIVE 3

Communities (counties) will improve their capacity to assess and take related to health and health-related infrastructure needs not met by e services and facilities.

INDICATOR 1

Enter the number of community (or county) action groups (e.g., heal that Extension (a) established or enhanced whose purpose includes i and closing gaps in health-related needs, (b) assisted in assessing needs and designing a community health plan to address those needs, number of community (or county) action groups implementing a commun plan during the past year with Extension assistance.

	Groups Established Or Enhanced	Groups Assisted in Assessing	Groups Implementing Plan
6yr Proj	265	120	70
1992	0	0	0
1993	0	0	0
1994	110	52	20
1995	151	65	46
1996	211	45	79
1997	0	0	0
Total	472	162	145

Data Collection Methodology

Extension annual accomplishment reports, SALIC and AgrAbility/FarmA monthly reports.

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	0
1993	0
1994	811602
1995	1257319
1996	1572000
1997	1600000
Total	5240921

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0
1994	16.0	2.0	0.0	0.0	0.0	0.0
1995	14.0	2.0	0.0	0.0	0.0	0.0
1996	16.0	2.0	0.0	0.0	0.0	0.0
1997	16.0	2.0	0.0	0.0	0.0	0.0
Total	62.0	8.0	0.0	0.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	0
1993	0
1994	2095

1995	3830
1996	5040
1997	5040
Total	16005

ADDITIONAL COMMENTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
SUSTAINABLE AGRICULTURE

NARRATIVE SUMMARY OF ACCOMPLISHMENT
The Sustainable Agriculture Task Force, consisting of faculty of the two 1
grant universities, federal and state agency staff, farmers, and NGO pers
provides input, vision and leadership for sustainable agriculture activit
Activities include:

1. The development and implementation of the state strategic plan for sustainable agriculture training. The development and implementation of t plan was an outgrowth of legislation from the Chapter 3 of the 1990 Farm I A sub-group of the Task Force, representing diverse viewpoints, worked to to develop the specific components of the strategic plan and the iplemena plan.

2. Training was provided to agents, agency personnel and farmers. Basic training was targeted at agricultural technicians and research faculty at A. & T. State University. This two-day session organized by Dr. John O'Sullivan, included theoretical discussions of concept, and farm visits. Several advanced, specialized sessions were conducted in the area of cont rotational grazing. Focus of these sessions included grazing management dairy cows, rotational grazing unit design and riparian zone management, a waste managemnet in grazing systems.

3. For the fourth consecutive year a sustainable agriculture forum was h discuss issues of importance affecting agricultural sustainability in NC. year's forum was held in conjunction with the W. K. Kellogg Integrated Fa Systems initiative networking meeting. The purpose of the forum was to b together stakeholders in NC agriculture and engage them in discussion of I issues. Farmers from across the USA attended and participated in this fo

4. The "Partners in Agriculture" project involves seven collaborating organizations including NCSU and NCA&T SU. This $993,000 project is focu sustainability issues in four communities in rural North Carolina. This project is part of the W. K. Kellogg Foundation's national Integrated Far Systems Initiative.

5. The Center for Environmental Farming Systems (CEFS) is a 2100 acre fa located near Glodsboro, NC. This farm is being devloped to address long- environmental and economic impacts of agriculture, study sytems of agricu production and provide demonstrational and educational opportunities for Extension programs. No-tillage sytems, oragnic production and the integr of crops and animals are areas of key focus at CEFS. This farm is the th direct result of recommendations made by the Sustainable Agriculture Task Force. Several advisory groups which include farmers, agency and NGO per have been active in various phases of this effort. CEFS is composed of s areas of emphasis including: conservation tillage, organic production met interated farming systems research and demonstraions.

6. The second NGO/Landgrant Summit was held at NCA&T State University i Greensboro. The purpose of this meeting was to bring together faculty an administrators from the landgrant universities with memebers of the NGO

cummunity in order to gain a better understanding of the roles and functi the various organizations in promoting sustainable agriculutre and to exp the possibility of collaboration and joint project development.

7. Extension faculty have brgun to network with the North Carolina Sustainable Agriculture Working Group (NCSAWG). The NCSAWG is a sounding and discussion group composed of more than a dozen NGO's. All of these g have an agricultural focus and are concerned about environmental and rura community issues. Meeting with the group on a regular basis has strengthe relationships and significantly increased the level of understanding betw the landgrants and NGO communities.

8. A comprehenisve survey was conducted among NCCES Extension faculty regarding perceptions and issues relating to sustainable agriculture. Th survey included county agents, specialists, county directors and administrators. Results serve as baseline on attitudes and perceptions o sustainable agriculture concepts by NCCES faculty.

9. For the past several years NCCES has collaborated with the Carolina F Stweardship Association in sponoring an annual sustainable agriculture conference. Extension has provided funding support, designated the Confe as a sunctioned training session for agents and provided funding support agent attendence. University faculty have regularly participated as speal and session coordinators for the conference.

County programs focused on sustainable agriculture issues such as riparia management, filter strips, field borders, conservation tillage, nutrient management. In one county soil erosion has been reduced due to no-till c acres increasing by 40%. In another county a dairy producer, working wit extension, developed a controlled, roational grazing plan resulting in im waste management and nutrient recycling, reduced pesticide application an erosion and an increased income of $13,000. In a mountain county an inov waste mangement plan for trout production has been initiated with assiste from the Pigeon River Fund. Waste extracted from the system is being com and sold as a fertilizer source. Organic production is beginning to expa NC. One farm operation in eastern NC consists of 270 certified acres.

SUCCESS STORIES

The interface of agriculure and wildlife are being studied in a comprehen quail management study has been initiated on 2,500 acres of land involvin farmers. The project provides a habitat for quail by maintaining a 15 fo border of grass and natural vegetation around all fields. These borders act as filter strips in protecting surface water by filtering contaminant streams and drainage areas.

Uncontrolled land development practices are a threat to the retention and use of agricultural land throughout the state. Extension has helped to g the process of intiating a comprehensive land development plan. County commissioners were undecided about approving a $25,000 proposal to produc comprehensive land development plan for the county. Extension developed educational programs that provided a complete analysis of the planning op This included conducting 18 community meetings to provide informationa a receive input from citizens. After receiving feedback through citizen co from the meetings, county commissioners decided to provide funds necessar

develop the plan

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Extension improves the use of integrated, interdisciplinary systems approach to the development of sustainable agriculture programs by Extension staff members and its clientele.

INDICATOR 1

Enter the number of Extension staff trained on sustainable agriculture concepts and approaches.

6yr Proj	50

	Number of Staff Trained
1992	64
1993	41
1994	29
1995	122
1996	44
1997	0
Total	300

Data Collection Methodology

Staff survey. Use a definition of "sustainable agriculture" that f:
context.

INDICATOR 2

Enter the number of sustainable agriculture programs and demonstrations implemented.

6yr Proj	50	50

	Number of Programs Implemented	Number of Demos. Implemented
1992	22	2
1993	42	190
1994	41	243
1995	751	524
1996	722	487
1997	0	0
Total	1578	1446

Data Collection Methodology

Maintain a roster of State and county staff involved in sustainable agriculture programs. Conduct an annual survey to identify programs and demonstrations implemented, projects submitted and, if successful, source of funds.

INDICATOR 3

Enter the number of producers adopting recommended sustainable agriculture practices and the total number of all practices adopted by all producers.

6yr Proj	50	0

	Number of Producers	Number of Practices Adopted
1992	0	0
1993	4989	9
1994	4744	9
1995	9949	9
1996	8800	9
1997	0	0
Total	28482	36

Data Collection Methodology

Survey an appropriate sample of producers, selected in the most pra way, and project statewide estimates.

OBJECTIVE 2

Public and private research and Extension organizations cooperate and coordinate efforts to develop sustainable agriculture systems in the US.

INDICATOR 1

Enter the number of projects developed for funding by the Sustainable Agriculture Act of the U.S. Congress.

6yr Proj	2

	Number of Projects Implemented
1992	0
1993	6
1994	4
1995	6
1996	4
1997	0
Total	20

Data Collection Methodology

INDICATOR 2

Enter the number of projects developed for and funded by sources other than the Sustainable Agriculture Act of the U.S. Congress.

6yr Proj	2

	Number of Projects

	Developed
1992	0
1993	1
1994	2
1995	14
1996	12
1997	0
Total	29

Data Collection Methodology

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	1368750
1993	1368750
1994	1368750
1995	1368750
1996	1368750
1997	0
Total	6843750

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	16.0	1.3	0.0	6.0	6.0	0.0
1993	16.0	1.3	0.0	6.0	6.0	0.0
1994	16.0	1.3	0.0	6.0	6.0	0.0
1995	16.0	1.3	0.0	6.0	6.0	0.0
1996	16.0	1.3	0.0	6.0	6.0	0.0
1997	16.0	1.3	0.0	6.0	6.0	0.0
Total	96.0	7.8	0.0	36.0	36.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	120
1993	120
1994	120
1995	120
1996	130
1997	130
Total	740

ADDITIONAL COMMENTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
YOUTH AT RISK

NARRATIVE SUMMARY OF ACCOMPLISHMENT

During the past five years, North Carolina Extension agents have been inv with the youth-at-risk initiative. This initiative has involved total st participation and has allowed the Cooperative Extension Service to expand programming effort to new audiences.

The Youth-At-Risk Initiative was designed to develop support systems for who live in environments which may hinder or prevent them from becoming competent, coping, and contributing members of society. Effective youth-at-risk programs must be holistic in design, involve the expertise various groups and agencies, and use the ecological model to encompass al factors which place youth at risk. Coalitions of agencies must identify needs of youths and design programs to address the needs and build suppor systems for youths and families. The North Carolina Cooperative Extensio Service has provided leadership in building coalitions and designing educational programs for youths in high risk environments.

In the early 1990's the youth-at-risk initiative was a new programming ar the Cooperative Extension Service. However, Extension agents and state specialists have been extremely successful in designing and implementing programs to support youths and families in at-risk environments. A prima reason for the success of Extension's efforts in youth-at-risk programmin the effective use of coalitions. During the past five years, more than 5 coalitions worked to address youth-at-risk issues. These groups were inv with needs assessments and helped Extension agents plan, implement, and evaluate programs for youth-at-risk. Coalition members were active as teachers, mentors, and role models for at-risk youths. Coalition members identified financial and human resources; prioritized needs and programs; provided accountability to stakeholders. Coalitions have helped maximize scarce resources and bring together the expertise needed for effective an efficient youth-at-risk programming. Approximately 291 long-term coaliti worked to monitor the long-range goals. More than 16,660 volunteers dona over 44,000 days to the Youth-At-Risk Initiative. Over 2,191,700 of fede 3,069,900 of state, 182,900 of local government, and 368,200 of private d were used to support youth-at-risk.

School-age child care programs were also used to support at-risk youths a families during the past five years. Extension agents provided training over 7,260 school-age child care workers. These workers provided care fo nearly 92,228 youths. Youths in before and after school child care participated in many Extension sponsored educational programs, including home economics, and agriculture.

The Cooperative Extension Service youth-at-risk programs have had a posit impact on youths. Over 2,540 adjudicated youths have reduced their invol in the judicial system. Nearly 37,600 youths improved their academic performance as a result of Extension programs. Improved study habits, increased school attendance, and reduction of out-of-school and in-school suspensions have also occurred. Nearly 7,800 youths decreased their alcol and other drug usage after participating in Extension programs. There ha

a reduction of behavior problems at home, school and with authority figur
Many youths are postponing sexual involvement. There has also been a red
in teenage pregnancy. Career training and preparation have been provided
over 33,550 youths. Many youths have improved their literacy skills as a
result of youth-at-risk programs. Over 1,790 science and technology prog
have been conducted. Nearly 3,430 youths improved their literacy skills
result of Cooperative Extension programs.

In addition to these results, youths improved their life skills, self-est
and decision-making skills. Youths developed conflict resolution skills
improved their interpersonal skills.

Youth-at-risk are being mainstreamed into 4-H and are increasing their
knowledge in numerous 4-H subject matter areas. These youths are partici
in summer day and residential camps, public speaking and fashion revue
contests, county fairs, presentations, and various citizenship and leader
roles. Many have improved their communication skills with peers, parents
other adults. Parenting classes have been provided to help parents be mo
effective at communicating with and relating to their children.

Cooperative Extension's work in youth-at-risk also helped develop many ot
successful programs for youth and families who live in at-risk environmen
In 1994, Governor Hunt initiated the Support Our Students Program (SOS).
SOS program is an after school program which targets at-risk, middle scho
youths. The 52 non-profit agencies in 52 counties which received these g
6 of them are 4-H programs, are being supported by State and County Exten
personnel in the areas of training, technical assistance, and curriculum.
Cooperative Extension will assist with the expansion of this program duri
1996-97.

The Governor's Smart Start program, an early childhood initiative started
1992-93, is also being supported by Extension agents. The program is in
than 36 counties and many Extension agents serve on Smart Start Advisory
committees and steering groups.

Extension agents were also involved with the development of Family Resour
Centers in numerous counties. During the development of the centers, the
Department of Human Resources sought the support of county Extension agen
help plan, design, and implement programs to support the work of the Fami
Resource Centers. Resources of the Cooperative Extension Service serve a
important role in the success of the Centers.

Extension agents have been very successful in building collaborative
relationships with schools and other groups to improve the quality and
availability of school-age care programs. Through Dependent Care, Block
AmeriCorps, and Support Our Students funds, more than $4 million have bee
to help create safe and developmentally appropriate child care of childre
youths in most of North Carolina's 100 counties. These have helped decre
many of the negative consequences associated with children being home alo
(i.e. accidents, pregnancy, substance abuse, loneliness, depression, and
exposure to television).

Over the past five years, the Cooperative Extension Service has demonstra
its capacity to have a positive impact on families and youths who live in

at-risk environments. The impact of the youth educational opportunities planned and conducted by Cooperative Extension has prevented many youths dropping out of school, becoming pregnant, getting involved with substanc abuse, and being incarcerated. These youths will become productive, contributing, and successful members of society. The impact of Extension youth-at-risk programs will benefit society for many years. However, the still many youths and families who live in at-risk environments and who n the support of the Cooperative Extension Service.

The term "Youth At Risk" and the efforts of youth work five years ago see carry the implicaion that the Cooperative Extension Service could direct work to this issue and solve the youth-at-risk problem. The fact is that working parents, single parents, poverty, and negative peer pressure will continue to place youth at risk of failing to reach their potential. Man youths do not have support systems to help them cope with risk factors (e poor parenting, negative peer pressure, poverty, poor school performance, which they face. Research suggests that protective factors at various l -- individual, family, peer group, school, and community -- must be in pl support youth-at-risk audiences. The global society of today is creating greater competition in the marketplace. Many youths are not prepared for job market. School dropout, academic achievement, teen pregnancy, drug ab child abuse, crime, violence, and othe adverse behavior prevent youths fr being competent, coping and contributing members of society.

During the past five years Extension agents demonstrated a need for youth-at-risk programming. These agents have been successful in building coalitions to identify youth needs and designing programs to address thes needs. The agents have secured funds to support youth-at-risk work. Age have been effective in utilizing volunteers and other resources to build support systems for youth-at-risk audiences. Agents are having long-term impact on targeted audiences. Agents have developed holistic programs wh involve all aspects of the youths' environments: parents, families, scho peers, and community. Appropriate resource people are being used to ensu effectiveness and efficiency of programs delivered.

In summary, there continues to be a need for youth-at-risk programming. Extension agents have been successful in building coalitions, utilizing d volunteers, and securing funding to help establish support systems for yo The Cooperative Extension Service is an important component in helping communities develop effective youth-at-risk programs. Therefore, there i need for Cooperative Extension to continue providing leadership in helpin design programs for youths who live in high-risk environments. However, programs must be holistic and involve all aspects of a youth's environmen (i.e. family, peer group, community, school, and work). The work of Cooperative Extension personnel has increased Extension's credibility amo various groups and agencies. More and more groups are looking to Extensi provide leadership in youths and family programs. Our work in youth-at-r during the past five years has taught us that in order to be successful, work must encompass all aspects of a youth's environment (i.e. parents, families, schools, peers, and community). Therefore, we plan to expand o work to include children, youth, and families at risk with special emphas placed on developing resilient youth, families, and communities. It is imperative that Cooperative Extension take the opportunity to provide leadership in this important societal issue. With Extension's leadership

support, programs can be designed to help youths become competent, coping contributing members of society.

SUCCESS STORIES
Harnett County
This year, more than 100 children have reaped the benefits of the Harnett County Cooperative Extension Before & After School Program. Homework completion increased significantly. Grades and social skills of children enrolled in the program improved

One Parent wrote; "...It has helped her feel so much better about herself improved her doing her homework. She learned a lot about the real import of taking her time and comprehending what she read. In a few short weeks her mature in many ways."

Another parent wrote; "My kindergartner had a problem in learning how to to 100. The teacher at Kids' World helped her by making a game out of it that she didn't even realize that she was learning to do so. Also, she d same with letter sounds."

Alleghany County
We received a $10,350.00 grant from the Department of Human Resources to a scholarship and marketing program for School-aged care. Several parent received the scholarship said that they would not have been able to send child/children through the Summer Day Camp program on a partial scholarsh The target audience was those currently going through job training classe who needed financial assistance, but make more than social service allows

We received a $40,000.00 grant from the Crime Prevention to start ACTS (Alleghany County Teen Services). Since I started work in 1993, the bigg need I have heard for youth is supervised activities for teens on the wee and after school. We are hiring a person to supervise the program that w consist of activities and programs from various volunteers in the county ranging from dancing to job skills. I have had over 60 people that have me and about another 50 I have met with that want to know how they can be involved. The 4-H County Council were the first to help develop the gran

Mitchell County
In 1994 the Mitchell County 4-H and Youth Development Program received a through the Support Our Students Initiative, a part of Governor Hunt's anti-crime bill. This grant was to provide $75,000 per year over a three period. An after-school program was established in four middle schools i county using grant funds. The 4-H "Discovery" After-school program is supervised jointly by the Mitchell County School System and the Mitchell 4-H and Youth Developmnt program. The overall objectives were to reduce number of unsupervised youth after school, to teach life skills and impro social, emotional and intellectual development.

In the period beginning in December 1994 thru June 1996, almost 400 diffe youth have been served. Using the SOS Evaluation Project Form in Decembe 1995 the following results can be reported:
*93% of youth have improved skills such as sewing, cooking, art, crafts, woodworking, etc.

* 86% of youth have increased awareness for the environment, wildlife, recycling, mountain heritage, or ecology.
*79% of youth developed an increased awareness of community service, volunteering and community pride projects.
*for 56% of youth, the Discovery Program provided a supervised alternativ being home alone.
* 33% of youth showed great change and 45% showed some change in homework completion.
*27% of youth showed great change and 48% showed some change in quality homework.
24% of youth showed great change and 33% showed some change in improvemen grades.
17% of youth showed great change and 43% showed some change in behavior
31% of youth showed great change and 45% showed some change in self-esteer
32% of youth showed great change and 39% showed some change in attitude t school.
Comments from parents:
"?????" has his homework finished on program days but on other nights he struggles through. His grades are improving rapidly."
"He has gained more confidence in what he's doing and proud of what he ca
"Before this program he wanted to stay out of school at least twice weekl saying he was sick, since this program started I haven't once heard, 'Mom sick, I can't go to school!'"
"Because of the after-school program ?????? has started recycling at home

Chowan County
The 4-H Friends of Youth: Governor's One on One program provides a volunt mentoring experience for youth ages 10-17 involved with juvenile court. program serves as a diversion from training school. It costs approximate $32,000 per person per year for training school incarceration.

Nine youth and mentors with the direction of the Governor's One on One Di participate in weekly mentoring activities and/or group activities to red alienation and rebellion, anti-social behavior, and association with peer engaged in similar behavior.

One success involves a participant who has not been involved in an on-goi positive youth experience. He attended 4-H Camp. His camp counselor sta Bobby, "was a pleasure to work with, very honest. When I asked him to do things, he did. He also was a leader, [I] wish he could stay longer. I all kids [I had] were as good as Bobby." Bobby received the Superior Cam award (peer and counselor selection process). Bobby aspires to serve as next year. The Juvenile Court Counselor indicated that it was unusual fo to receive such an honor.

Pitt County
If newspaper headlines are the measure used to evaluate the condition of communities where young people are growing and developing, we could make argument that all youth should be labeled "at risk." In order to give yo higher crime areas educational and constructive experiences the 4-H progr a resource that is often recruited. During 1995 and 1996 the Pitt County Program organized and/or maintained six 4-H clubs in at-risk areas and ma

presentations to approximately 1,100 youth in 10 different at-risk commun: to provide them with goal setting and personal skills to achieve their go:

In many cases at-risk youth blend into 4-H events and programs using appropriate behavior and winning awards as frequently as other 4-Hers. T youth from the Greenville Community Shelter attended summer camp in 1995. returned home with a superior camper award and the other camper was nomin: for the award. From the 325 project records completed by Pitt County 4-H in 1995, fifteen were from youth in clubs in at-risk areas.

The 4-H program emphasis on healthy lifestyles, citizenship, and developi leadership potential encourages youth from at-risk environments to achiev their goals and make their communities better places to live.

Gates County
Interagency collaboration has enabled the Gates County 4-H Program to rea risk youth" with long term units, specifically the P.A.C.T.T. Program (Pa & Children Can Train Together). The PACTT program works with youth ages and their parents in order to expose them to 4-H values and life skills. result of participation in the program, youth have, for the first time, b involved in 4-H presentations, 4-H camps and project work. In addition, adult participant had become employed and is off the welfare system. Thr information obtained in PACTT was able to obtain permanent fulltime emplo

The GENESIS Program (African-American teen male leadership program) has e these young men to develop life skills and become involved in 4-H activit Twenty-nine are being reached in grades 7-12. Accomplishments are as fol 91% improved interpersonal relationships; 45% completed goals set; pre-te and post-tests indicate knowledge gained by 100%; 66% showed improvement behavior; 0 youth entered judicial system

Forsyth County
The 1995-1996 Forsyth County AmeriCorps Team consisting of Heather DeVaul Michelle Greene, Tenesha Larkin, Shannon Whitehead-Hall, and Peggy Willia very good at what they do in afterschool programs.

Since October 1995, these members have reached approximately 2,000 childr afterschool programs-seeing these same children four to five times a mont Thus far, through our summer sites and Summer Adventures Programs, approximately 700 children have been reached.

Heather DeVault has built a special relationship with a teen that was in of a friend. The young lady was very withdrawn and shy. Heather's patie and understanding of youth helped this teen to open up to Heather and sha family's problems. They have developed a special bond that will be remem by both of them for years to come.

On National Community Service Day, our AmeriCorps members went to Brenner Childrens Hospital. They learned valuable lessons that day, since two of are mothers themselves.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1
SCHOOL AGE CHILD CARE EDUCATION: Extension will help communities establish school age child care educational programs for ages 5-14 and encourage existing providers to adopt Extension curriculum.

INDICATOR 1
Enter the number of communities needing School Age Child Care (SACC) out of the total number of communities surveyed.

6yr Proj	1210	1200
	Number of Communities Surveyed	Number Needing SACC
1992	11	9
1993	430	430
1994	372	372
1995	388	388
1996	410	410
1997	0	0
Total	1611	1609

Data Collection Methodology
Community needs assessment.

INDICATOR 2
Enter the number of children served by child care programs established with Extension involvement.

6yr Proj	66000
	Number of Children Served
1992	1000
1993	23475
1994	15554
1995	25049
1996	28150
1997	0
Total	93228

Data Collection Methodology
Survey child care providers.

INDICATOR 3
Enter the number of existing provider staff receiving training.
Enter the number of provider staff adopting Extension curriculum.

6yr Proj	6725	6300

	Number of Provider Staff Trained	Number Adopting CES Curriculum
1992	1610	1175
1993	2060	2060
1994	1357	1357
1995	1697	1697
1996	2150	2150
1997	0	0
Total	8874	8439

Data Collection Methodology
Survey child care providers.

OBJECTIVE 2
YOUTH LITERACY: Extension will enhance the reading and science/technology literacy of program participants.

INDICATOR 1
Enter the percent of the total number of participants involved in literacy programs showing literacy improvements.

6yr Proj	15.0	15000

	Percent Showing Improvement	Number of Participants
1992	0.0	0
1993	56.0	9491
1994	100.0	1474
1995	100.0	395
1996	100.0	1560
1997	0.0	0
Total		12920

Data Collection Methodology
Staff records of participation and enrollment, supplemented by narrative description of accomplishments.

INDICATOR 2
Enter the number of science/technology programs and/or projects initiated or projects rewritten to emphasize science and technology content and approaches.

6yr Proj	5

	Number of Sci/Tech Programs
1992	0

1993	353
1994	532
1995	416
1996	491
1997	0
Total	1792

Data Collection Methodology
Staff records of participation and enrollment, supplemented by narrative description of accomplishments.

OBJECTIVE 3
COLLABORATION FOR HIGH RISK YOUTH: Extension will obtain commitment of academic resources at the Land Grant University and work with community agencies to provide training and other educational components for the developmental needs of high risk youth.

INDICATOR 3
Enter the number of longer-term collaborations/coalitions organized to address complex issues.

6yr Proj	15

	Number of Cooperations/ Coalitions
1992	3
1993	67
1994	85
1995	48
1996	291
1997	0
Total	494

Data Collection Methodology
Survey university and community collaborative efforts.

INDICATOR 4
Specify the purpose(s) of longer-term collaboration/coalitions to address complex issues.

1996 ACTUAL RESULT(S)
The long-term coalitions were used for many of the same purposes as coalitions addressed above; however, the long-term coalitions devel holistic programs designed to address issues of families and their The primary goal of the long-term coalitions was to develop resourc would improve the quality of life for families. Many of the progra parent components in addition to the youth-at-risk aspect. Coaliti used to identify long-term goals and reduce and prevent duplication services. These coalitions provided long-term tracking and evaluat educational programs provided to youth-at-risk audiences. Specific coalition members included accessing needs, prioritizing needs and funding, referral services, networking to maximize resources, tutor teachers, mentors, expanding quality child care services, providing for children with special needs and increasing availability of chil

Subject matter taught and programs addressed were identical to those
Number 10 above.

Data Collection Methodology
Survey university and community collaborative efforts.

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	680000
1993	680000
1994	680000
1995	680000
1996	680000
1997	680000
Total	4080000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	9.4	1.8	0.0	3.4	1.3	0.0
1993	9.4	1.8	0.0	3.4	1.3	0.0
1994	9.4	1.8	0.0	3.4	1.3	0.0
1995	9.4	1.8	0.0	3.4	1.3	0.0
1996	9.4	1.0	0.0	3.4	1.3	0.0
1997	9.4	1.0	0.0	3.4	1.3	0.0
Total	56.4	9.2	0.0	20.4	7.8	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	1040

1993	1040
1994	1040
1995	1040
1996	1040
1997	1040
Total	6240

ADDITIONAL COMMENTS

PROGRAM CONTACTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
COMMUNITIES IN ECONOMIC TRANSITION

NARRATIVE SUMMARY OF ACCOMPLISHMENT

Rural North Carolina communities continue to be affected by the great soc economic and environmental changes taking place within the larger society although the effects differ greatly across the state. Local citizenry interpret these changes as opportunities or threats and seek to define th future as overcoming the threats and/or taking advantage of the opportuni In many cases community leaders recognize the need to engage the citizenr collaborative planning process. Strategic planning is one of several met amenable to collaboration that may be used to identify diversification opportunities, deterrents to deveolopment and need for infrastructure improvements. Successes in strategic planning underscore the importance concerned citizenry that is capable of analyzing the local situation and willing to act on their findings. It also requires local leaders who are willing to promote the use of participatory processes to address local concerns, especially where the duel values of economic development and environmental protection come into play.

Reported accomplishments in entrepreneurial education continue to reflect reduction in FTE's at the state and area levels of the organization over last several years. 2901 new, current and potential entrepreneurs were assisted to analyze their enterprize. Of these, over 462 made informed decisions about a business start-up as a result of extension assistance. Estimates in new business start-ups amounted to over $1,240,000. We cont to find, however, that our greatest successes occur when our personnel ar available to new entrepreneurs over an extended period of time.

SUCCESS STORIES

Interdisciplinary Extension Team Proves to be
Viable Planning Partner to Craven County

Craven County, with its county seat of New Bern, is a coastal plain count has experienced impressive economic growth over the past two decades. A favorable business climate, successful industrial recruitment, the presen the Marine Corps Air Station at Cherry Point and the area's increasing popularity as a retirement and tourism destination have all contributed t strength of the local economy. Significant increases in population also occurred over the same period. For the most part, these changes are attributable to the environmental amenities and "quality of life factors" in the county.

However, this growth has placed enormous strains on the publicly supporte infrastructure and on the natural environment. This is most evident in t area of wastewater management. While most residents favor continued econ growth, there also is wide spread concern over the impact this growth has on the area's natural resources, especiallly on water quality of the Neus Trent Rivers. In addition, if the present trends continue, data indicate amount of wastewater generated within the county will exceed the capacity the wastewater treatment infrastructure within 10 years. County commissi recognized that meeting future wastewater treatment needs would require significant "up-front" planning. They also recognized the potential conf

between growth proponents and advocates of environmental protection that c
stymie county -wide support for the desired wastewater management
recommendations. Recognizing these and other potential hurdles, the
commissioners turned to Billy Dunham, county extension director, for help
developing the plan through a collaborative, consensus building planning
process. Mr. Dunham called on a team of specialists from North Carolina
University to help design and support this process. Several specialists
focused on the design and facilitation of the planning process, while oth
focused on the required technical content. Funding to supoort the planni
process was provided to Craven County through a grant established by the I
Carolina State Legislature to evaluste the wastewater needs of the lower I
Rilver Area.

To realize consensual recommendations the preocess needed to be inclusive
and well organized. To achieve inclusiveness 21 members representing dif
needs and concerns regarding wastewater management were identified by loc
interest groups and appointed by the commissioners to a wastewater manage
advisory committee. The committee convened in April, 1995 by establishin
agreeing on a set of collaborative principles, which included a set of gr
rules for discussion and decision-making, a time table for estimated comp
of the mission, and a plan to keep the non-participating publics informed
while seeking feedbafck from interested citizens. The committee met 22 t
over the next 14 months and conducted 10 public outreach meetings in comm
centers throughout the county. The firt six months were devoted to an
assessment of the existing situation and a review of available technologi
options. This was followed by an effort to formulate possible scenarios
different sections of the county. By Januyary 1996 the scenarios were re
and subjected to economic analysis. At this point several alternatives w
eliminated as too costly. The committee then established a set of guidin
principles to which the final recommendations had to conform and assigned
NCSU technical team the task of writing a provisional plan. The provisio
plan was reviewed and revised by the advisory committee during May, 1996.
final consensual plan, which consisted of five recommendations, accompany
suggested strategies and supporting data, was finalized during the summer
months and presented to the county commissioners in September, 1996. The
committee members were so pleased with the consensual recommendations pro
through the collaborative process that they held a dinner honoring specia
prior to the presentation of the plan to the county commissioners.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Communities will analyze their economic base and implement strategic e
development planning.

INDICATOR 1

Enter the number of strategic community-based economic development
developed and implemented with extensive Extension support.

6yr Proj 40

	Number Devel. and Implemented
1992	0

1993	0
1994	13
1995	14
1996	5
1997	0
Total	32

Data Collection Methodology
Specialists' reports; county staff reports; surveys, both immediate and follow-up; interviews.

INDICATOR 2
Enter the number of economic analyses conducted with communities.

6yr Proj 20

	Economic Analyses Conducted
1992	0
1993	0
1994	11
1995	0
1996	0
1997	0
Total	11

Data Collection Methodology

INDICATOR 3
Enter the number of business retention and expansion programs imple
communities.

6yr Proj 4

	Business Programs Implemented
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology

INDICATOR 4
Enter the number of community-based targeted industry studies conducted to support strategic economic development.

6yr Proj	2

	Studies Conducted
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology

INDICATOR 6

Enter the number of community-based tourism development plans initi

6yr Proj	4

	Tourism Devel. Plans Initiated
1992	0
1993	0
1994	1
1995	0
1996	0
1997	0
Total	1

Data Collection Methodology

OBJECTIVE 2

Communities will enhance ability to support job creation and enterpris development.

INDICATOR 1

Enter the number of entrepreneurial activities undertaken at the co level.

6yr Proj	30

	Entrepren. Activities
1992	0
1993	0
1994	11
1995	0
1996	9

1997	0
Total	20

Data Collection Methodology

INDICATOR 4

Enter the number of new enterprises created as a result of Extensio
programming.

6yr Proj	30

	New Enterprises Created
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology

INDICATOR 5

Enter the number of new jobs created via new/expanded enterprises.

6yr Proj	1000

	New Jobs Created
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology

OBJECTIVE 3

Existing businesses and small industries will improve competitiveness,
profitability, and marketing capabilities.

INDICATOR 2

Enter the number of small firms entering new domestic and/or foreig
via Extension educational activities.

6yr Proj	20

	Firms

	Entering New Markets
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	0
1993	0
1994	0
1995	0
1996	245000
1997	245000
Total	490000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0
1994	30.8	0.0	0.0	1.0	1.0	0.0
1995	30.8	0.0	0.0	1.0	1.0	0.0
1996	15.0	1.0	0.0	0.0	0.0	0.0
1997	15.0	1.0	0.0	0.0	0.0	0.0
Total	91.6	2.0	0.0	2.0	2.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	0
1993	0
1994	4000
1995	4000
1996	2000
1997	2000
Total	12000

ADDITIONAL COMMENTS

PROGRAM CONTACTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
WATER QUALITY

NARRATIVE SUMMARY OF ACCOMPLISHMENT

During 1996 the swine industry has continued to expand in the state v much of it occurring in Sampson, Wayne and Duplin Counties. Duplin and Sa Counties became the top swine producing counties in the U.S. and Duplin ha more poultry and swine than any other county in the U.S. Agency assistan been utilized on the design and management of new waste treatment lagoons waste utilization plans and development of nutrient management plans. Producers have been assisted to calibrate spreaders or irrigation systems apply manure at optimum rates and application patterns. Nutrient manageme plans account for all forms of nitrogen available on the farm and ensure t they are applied at optimum times for crop utilization. The amount of ni that is to be appleid is based on the specific crop, the soil type, and tl realistic yield expectations.

Due, in part, to the lagoon spills in 1995, the North Carolina G Assembly passed legislation requiring certification of operators of anima waste management systems. This certification involves a minimum of 6 hou classroom study, passing an exam and paying an annual $10 fee. An educat curriculum consisting of 8 hours classroom study was developed which cons of a trainer's guide consisting of 117 pages of instructional guidelines a 214 slides. The conjunctive text, "Certification Training for Operators c Animal Waste Management Systems" which contains 172 pages was provided fo student.

SUCCESS STORIES

National Nonpoint Source Monitoring Project

During the past 6 months best management practices were installed in t Long Creek Watershed Project. They are already beginning to see water qu improvements.

An EPA 319 National Nonpoint Source Monitoring Project in the Long Cr Watershed has undergone major changes since the beginning of the year. S Best Management Practices (BMPs) have been installed at a dairy farm in a effort to improve water quality. In February, 1100 feet of stream banks v fenced with a stream buffer ranging from 50-100 ft. Eroded stream banks v graded to a 2:1 slope and revegetated with grass. In early March, the No Carolina Forest Service planted a a mixture of hardwoods and loblolly pin within the riparian zone. In addition, a watering system was installed t supply water to cows.

The results that have been seen are very encouraging. Almost all of trees have leaves and are growing. A heavy stand of grass covers the ero stream bank which is now stabilized. Volunteer grass has also emerged providing an ex cellent buffer for the stream. They are also seeing some the lowest pollution levels ever in the stream.

County Commissioners Authorized Wastewater Management Plan

Over the last 20 years, impressive economic growth has occurred in southeastern North Carolina. This economic growth has significantly incr the county's population and has placed strains on the county's infrastruc and the natural environment, specifically on the management and disposal wastewater. While most of county's residents desire continued economic g there is also widespread concern among the county's residents over the im

that this growth has had on the area's natural resources, particularly on quality. By the year 2003, the county's homes and businesses will likely produce one million more gallons of wastewater each day than they do at present. In recognition of the need to develop wastewater management strategies that balance continued economic development with environmental protection, the county extension center requested and received a $100,000 from the county board of commissioners to develop a comprehensive wastewa management plan for the county. The county received these funds from a s grant from the Department of Environmental Management and it could have b utilized for many other projects.

A project team of six university specialists put a plan together would recommend a short term(ten-year) comprehensive wastewater managemen to the county commissioners within a one-year time frame. The plan would developed by a committee of 21 county residents appointed by the county commissioners and they would address the distribution and location of wastewater collection systems, the existing and future treatment capacity discharge/reuse of treated wastewater, and the continued use of on-site wastewater management systems. The work of the committee would be suppor the team of faculty members from the North Carolina Cooperative Extension Service and the county extension center.

After one year of studying and holding community information meetings committee developed a comprehensive plan for wastewater management that address the needs of the county for the next ten years. This document ca used by developers, county commissioners, other counties, the Regional Wastewater Advisory Committee, municipalities and others in planning for and the need for environmentally sound disposal of wastewater in the coun This report has been enthusiastically accepted by the county commissioner now local meetings are being conducted to disseminate report information gain widespread acceptance of recommendations.

National Drinking Water Week

In order to focus on National Drinking Water Week, the family and con education agent in one county presented a Water Conservation Program for third-grade classes and preschool classes. The program consisted of explanation of the water cycle, making a Terrarium for each 3rd grade cla children pledging to save watery, seeing a puppet show, giving drinking w hand banner, distributing goody bags and handouts for students and teache

After the program, students were given an activity sheet that consis eight ways to conserve water and save the environment. These weekly acti were turning water off while brushing teeth, color the water cycle at wor complete Blue Thumb Search, check home for leaky faucets, fill tub half w complete water maze and color Blue Thumb Coloring Fun. Out of the 275 3r graders, 141 completed all eight activities. In return, these individual received a certificate.

County Policies/Issues Organization

A pressing need for the agricultural segment of society to speak up policies that affect them and their livelihoods brought about an effort o Extension's part to organize a support group for agriculture. The group attempts to stay abreast of policies/issues affecting agriculture such as animal waste regulations and water quality and provide input thereof. As result of Extension's efforts to educate the public on the importance of an organization, this group is now formally organized with 79 members.

Well Screening Day

As a result of a "Well Screening Day" conducted by the Cooperative Extension Service and the local health department, 311 people in Sampson County have a better understanding of the quality of their drinking water Wells were screened for nitrates. If a high nitrate reading was found, tl health department did a follow-up test to determine the safety of the water. Only 16 of the 311 wells tested indicated nitrate levels exce the government standard. There have been so many questions raised about ground water that this was a "reassuring" program for many of the citizen

Certification Training for Operators of Animal Waste Management Systems

In Duplin County, the Certification Training for Operators of Animal Management Systems was provided to 649 swine producers. Participants lea proper management of swine waste systems and proper application technique swine wastes, as well as consequences of improper management and environmental stewardship. As of July 10, 1996, 241 Duplin County sw producers had passed the exam necessary for certification; however, many of the producers have yet to take the exam for the first time. Prod who successfully complete the educational curriculum, pass the examp and the $10 fee will avoid a possible $1000 fine; therefore, $241,000 in poss fines were avoided. Additionally, the management techniques discussed wi help to reduce possible negative environmental impacts of swine productio the county. Many of the participants have remarked that they learned a g deal and complimented the Extension agents as instructors.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

NUTRIENT MANAGEMENT

Agricultural producers will reduce/prevent water degradation from plant nutrients.

INDICATOR 1

Enter the average annual rate of application of commercial nitrogen fertilizer in the identified problem area for the crop, the nitrogen fertilization of which is expected to pose the greatest nitrate threat to water quality in the state/territory over the next four years. (Press F2 for definitions and suggestions).

6yr Proj	corn	110	15117

	Name of Crop	Average Lbs/acre of N Applied	Total Acres of Crop in Problem Area
1992	corn	165	0
1993	corn	155	16000
1994	corn	130	16000
1995	corn	130	16000
1996	corn	121	18000
1997		0	0

Data Collection Methodology

1. Fertilizer recommendation for corn is 120-140 lbs/acre.
2. Published recommendations in North Carolina Agricultural Chemica
Manual and Extension Soil Fact Sheets are used.
3. Data is collected by project personnel which survey all farms.

INDICATOR 2

Please list in this narrative section the THREE highest priority practices for producer adoption that potentially result in reduced rates of application of commercial nitrogen to the identified crop and/or potentially reduced rates of loading of nitrate to water resources in the identified problem area. And, DESCRIBE Extension plans to get these practices adopted. Choose specific practices from the list available via the F2 key. Modify and add to the list as necessary.

1996 ACTUAL RESULT(S)

Data Collection Methodology

1. Fertilizer recommendation for corn is 120-140 lbs/acre.
2. Published recommendations in North Carolina Agricultural Chemica
Manual and Extension Soil Fact Sheets are used.
3. Data are collected by project personnel which survey all farms.

OBJECTIVE 2

PESTICIDE MANAGEMENT

Agricultural producers will reduce/prevent water degradation from pesticides.

INDICATOR 1

Enter the acres of application of the most water quality sensitive pesticide for the selected crop. This pesticide has the active ingredient which is expected to pose the greatest pesticide threat to water quality in the state or territory over the next four years. (Press F2 for definitions and suggestions).

6yr Proj	alachlor	corn,soybeans	13537	2707
	Name of Pesticide	Name of Crop	Acres Applic. of Pesticide to Crop	Total Acre of Crop i Problem Are
1992	alachlor	corn,soybeans	13537	2707
1993	alachlor	corn	9000	1600
1994	alachlor	corn	8200	1600
1995	alachlor	corn	8000	1600
1996	alachlor	corn	8500	1800
1997			0	

Data Collection Methodology

Crop: Corn

Data Collection: From ASCS reports.

INDICATOR 2

Please LIST in this narrative section the THREE highest priority practices for producer adoption that potentially result in reduced acres of application of the pesticide to the crop and/or potentially reduced rates of loading of the pesticide to water resources in the identified

problem area. And, DESCRIBE Extension plans to get these practices adopted. Choose specific practices from the list of examples available via the F2 key. Modify and add to the list as necessary.
1996 ACTUAL RESULT(S)

Data Collection Methodology
OBJECTIVE 3
ANIMAL WASTE MANAGEMENT
Agricultural producers will reduce/prevent water degradation from animal wastes.
INDICATOR 1
Enter the type of animal waste that is expected to pose the greatest threat to water quality in the state/territory over the next four years. Then, enter the number of animal units (of the species of animal producing the identified type of animal waste) for which producers use one or more practices to hold to an acceptable degree the runoff and/or infiltration from concentrations of the specified type of animal waste. (Press F2 for definitions and suggestions.)

6yr Proj	swine	22800	57000

	Specified Animal Waste	Animal Units for which Practs. Used	Total Animal Units in Prob. Area
1992	swine	22800	57000
1993	swine	34000	60000
1994	swine	45000	71000
1995	swine	58000	75000
1996	swine	82000	83000
1997		0	0

Data Collection Methodology
Type of waste: Lagoon Liquid
Data Source: Extension Agent Survey
INDICATOR 2
Please LIST and discuss in this narrative section the THREE highest priority practices for producer adoption that potentially result in holding animal waste runoff and infiltration to an acceptable degree and/or potentially reduced rates of loading of animal wastes to water resources in the identified problem area(s). And, DESCRIBE Extension plans to get these practices adopted. Choose specific practices from the list of examples available via the F2 key. Modify and add to the list as necessary.
1996 ACTUAL RESULT(S)

Data Collection Methodology
OBJECTIVE 4
QUALITY OF WELL WATER/WELLHEAD PROTECTION

Households will protect/improve quality of private domestic use well water.

INDICATOR 1

Enter the number of domestic-use wells in the problem area, the number of such wells tested, and the number of those wells tested found to be polluted, i.e., do NOT meet health standards, due to biological, nitrate and/or pesticide contaminants. (Press F2 for definitions and suggestions.)

6yr Proj	150	750	1500
	Number of Tested Wells Polluted	Number of Wells Tested	Total Number of Wells in Problem Area
1992	40	189	1500
1993	24	98	1500
1994	24	120	1500
1995	24	120	1530
1996	19	311	1600
1997	0	0	0

Data Collection Methodology

Data sources are:

1. North Carolina Extension Groundwater Education and Testing Program and EPA Well Testing Program

INDICATOR 2

Please LIST in this narrative section the THREE highest priority wellhead protection practices that potentially result in minimizing the number of polluted wells in the identified problem area(s). And, DISCUSS Extension plans to get these practices adopted. Choose specific practices from the list of examples available via the F2 key. Modify and add to the list as necessary.

1996 ACTUAL RESULT(S)

Data Collection Methodology

OBJECTIVE 5

PUBLIC POLICY EDUCATION

Public officials and citizens will act at the local level to protect and/or improve water quality.

INDICATOR 1

Enter the number of counties in the identified problem area(s) where Extension conducts public policy education to improve/protect water quality, and the total number of counties in the identified problem area. (Press F2 for definitions and suggestions.)

6yr Proj	3	3
	Counties Recv. Ext. Pub. Pol. Ed.	Total Number of Counties in Prob. Area
1992	3	3

1993	3	3
1994	3	3
1995	3	3
1996	3	3
1997	0	0

Data Collection Methodology
INDICATOR 2
Please LIST in this narrative section the THREE highest priority public policy education processes that potentially result in strengthening public policy regarding water quality in the identified problem area. And, DESCRIBE Extension plans to get these processes implemented relative to community leaders, local government, etc. Choose specific processes from the list of examples available via the F2 key. Modify and add to the list as necessary.
1996 ACTUAL RESULT(S)

Data Collection Methodology

PART B OBJECTIVES AND INDICATORS

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	4497500
1993	4497500
1994	4497500
1995	4497500
1996	4497500
1997	4497500
Total	26985000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	79.3	0.0	0.0	12.3	0.0	0.0
1993	79.3	0.0	0.0	12.3	0.0	0.0
1994	79.3	0.0	0.0	12.3	0.0	0.0

1995	79.3	0.0	0.0	12.3	0.0	0.0
1996	79.3	0.0	0.0	12.3	0.0	0.0
1997	79.3	0.0	0.0	12.3	0.0	0.0
Total	475.8	0.0	0.0	73.8	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	3500
1993	3500
1994	3500
1995	3500
1996	3500
1997	3500
Total	21000

ADDITIONAL COMMENTS

PROGRAM CONTACTS

Frank J. Humenik
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NORTH CAROLINA 1996 ANNUAL REPORT:
EXPANDED FOOD AND NUTRITION EDUCATION PROGRAM

NARRATIVE SUMMARY OF ACCOMPLISHMENT
A. Objectives

Three thousand seven hundred and fifty (3,750) EFNEP families will acquir knowledge, skills, attitudes and changed behavior for nutritionally sound and to contribute to their personal development.

Ten thousand (10,000) 4-H EFNEP youth will acquire the knowledge, skills, attitudes and changed behavior necessary for nutritionally sound diets an contribute to their personal development.

The EFNEP state program will increase interagency cooperation.

Pregnant and parenting teenagers will increase knowledge of maternal/infa nutrition, resulting in improved maternal and infant health.

To increase numbers of WIC mothers establishing lactation (beyond two wee post-partum: (baseline - 75%) and duration of breast-feeding past two mo post-partum: (baseline - 17%).

B. Non-Extension Resources

Total of $452,840 in additional funds. This includes $427,000 in state g (Health Department and Smart Start funds); and $25,840 from local and pri contributions

Non-Extension agencies providing training, support and/or referrals: loc agencies (Health Department, WIC program, Social Services--AFDC, DSS/JOBS programs, Governor's Smart Start Program, Schools, Technical Community Colleges, Division of Child Nutrition, Head Start) NC Food Bank, Habitat Humanity, Parks & Recreation programs; Private sector (banks, agribusines local business, medical community) Advisory Councils/Committees, Law Enforcement, Churches, Civic groups, United Way, Women' shelters, Women's correctional centers, Day Care sites, Boys and Girls Clubs, After-school programs, Mass media, La Leche League, homeless shelters, Housing authori Youth Foster Homes, Florence Critendon Homes, graduated program particip Volunteers who assist in teaching the ERIB curriculum.

D. Other Indicators and Accomplishments

Interagency Cooperation

Evidence of increased agency cooperation during the five-year period is c The numbers and percent of enrollments of WIC participants in EFNEP rose 3883 (63%) in FY:92 to 5792 (67%) in FY:96; percent enrollment in the Foo Stamp program remained above 50% throughout the four year period when tot enrollment increased, but fell to 36% in FY:96. Enrollment of WIC partic increased considerably because of ES/WIC grant-funded projects, such as t breast-feeding support program in ten counties, and the pregnant teen pro with its expansion throughout the state.

During the same period, EFNEP staff increased their teaching efforts with groups, largely with preformed groups referred from other agencies. Perc EFNEP participants being taught in groups rose from 56% in FY:92 to 72% i FY:95. (Note: These numbers excluded 1384 breast-feeding participants i FY:96, who were all taught on an individual basis).

In two large urban counties, EFNEP staff were teaching WIC clients on a fulltime basis, using a modification of the ERIB curriculum, and using a computerized program to reconcile the two reporting systems. In one coun EFNEP enrolled 2,300 WIC participants in four clinic sites; 890 graduated during the year. It was found that agencies were more responsive to offe the ERIB curriculum when the curriculum proposal had been tailored to the interests, needs and scheduling constraints. By tailoring the curricula, on-site teaching opportunities have occured, thus allowing EFNEP to reach participants with fewer EFNEP funds. Such innovative programs as well as group meetings have become a necessary delivery mode as more low-income homemakers are employed outside the home. In increasing numbers, groups immigrant populations, especially Hispancis, are benefiting from EFNEP participation.

By the end of FY:96, fourteen paraprofessional positions for carrying out programs in six counties were funded through Smart Start, a state initiat which provided funds to coalitions at the community level. This would no happened without EFNEP being an important part of the community partnersh

Dietary Improvement

Of 19,584 homemakers who graduated from EFNEP during the five-year period 14,731 (75%) improved their diets to include at least one serving of food each food group (31% increase from program entry). Four thousand two hun and ninety homemakers (22%) achieved recommended food servings in all foo groups, an increase of 21% from program entry.

Breast-feeding Support Programs

Breast milk provides infants with optimal nutrition for healthy growth an development, in addition to protection from infection and allergic reacti Breast-feeding is the preferred method of feeding infants.

Beginning in 1992, a pilot program in breast-feeding support to WIC mothe carried out in Wake County. Funded by WIC, a specially trained EFNEP paraprofessional carried out in-home breast-feeding support with WIC clie Analysis of data indicated that greater numbers of women established lact and were still breast-feeding at 2 weeks postpartum than with a control g Breast-feeding duration also increased significantly among those who rece EFNEP support.

By FY:96, the breast-feeding support program had expanded to nine additio counties, a mixture of urban and rural sites. Seven were established thr federal ES/WIC grants and two through the state Smart Start program. In years, over 5800 WIC clients had received breast-feeding support from EFN staff in ten counties.

Results showed that numbers of WIC clients choosing to breast-feed had increased, and that a significantly greater number and percent were still breast-feeding at two weeks, six weeks and eight weeks postpartum when co with baseline WIC records. These effects were independent of urban or ru status. Similar results were reported in Michigan where the Wake County r was carried out with ES/WIC project funds.

Because breast-fed babies are protected from many common diseases of infa it has been estimated that $29 million could be saved annually if all WIC mothers in the USA breast-fed their babies exclusively for the first mont life. In the 10 breast-feeding project counties in North Carolina in FY: over 70% of participants were still breast-feeding at four weeks post-par

Pregnant Teen Program
An ES/WIC grant has addressed the need of support to pregnant teens in achieving positive pregnancy outcome. An experiential curriculum emphasi nutrition and peer support involves the teens in interactive learning. T curriculum was piloted tested, edited and printed during the initial year Delivered in school groups and individually to homebound teens, the proje being evaluated for nutrition knowledge and preparation skills. The ulti outcome is the birth of babies who exceed the minimum desired birth weigh

Data indicates 90% of the live births exceeded the minimum weight with a r birth weight of 7 lbs. 6 ounces. Presently 97% of the enrolled teens are recipients at graduation.

The pre/post curriculum survey indicates that the biggest improvement mad the participants is in diet knowledge, followed by knowledge of other pre practices. Of the possible 18 lessons, the pregnant teens participated i average of 12.3. Analysis of the 24-hour food recall showed improvement minimum food consumption pattern, but only a slight increase in achieveme the recommended pattern.

The pregnant teen program has experienced success with counties other tha pilot with more than 4,000 pregnant teens being reached through EFNEP in 5-year period, FY: 1992-1996. One of the project objectives in the 1994- proposal was the training of all EFNEP program assistants against the curriculum "Hey What's Cookin'". Since the completion of the training, o 2,000 pregnant teens have been involved. Funding for additional program assistants to target pregnant teens in several counties was secured throu State program "Smart Start".

Northampton County offered "Hey What's Cookin'" in two high schools and o middle school. All twelve teens who enrolled delivered healthy babies. middle school counselor felt that her two students who participated in th program made more progress and a better adjustment to the situation than student who refused.

Forsyth County gained entry and monetary support of two schools and a hom unwed mothers. Of the babies delivered none have been below the minimum desired weight.

Robeson County took the program into one junior high school during 94-95. success of the one program resulted in opportunities to offer the program

two high schools during the year 95-96.

Expended FTE's

	Prof	Para	Vol	# People
1992	8	73.2	13.6	2147
1993	8	76.0	12.0	1821
1994	8	78.3	9.1	1763
1995	9	88.0	11.5	1910
1996	9	82.3	18.7	3734

E. Narrative and Implications

The EFNEP program has reached more that 36,000 adults and 31,000 youth du the five years ending in FY:96.

While most of them were reached through traditional EFNEP program efforts individuals and small groups, increased opportunities arose to teach pref groups referred by cooperating agencies. Percent of adult participants b worked with in groups rose from 56% in FY:92 to 72% in FY:95. This perce dropped to 60% in FY:96 because of substantial enrollment of breast-feedi mothers in the regular EFNEP program. Most of them were taught individua

Some of the less traditional adult groups reached were in community shelt and correctional centers. Youth were taught in Alternative school progra After-school Programs, Youth Foster Homes, Boys and Girls Clubs as well a community groups. Some non-traditional youth groups included physically challenged, academically gifted, Native American, Hispanic, youth of seas farm workers and court adjudicated youth.

Evaluation data indicated that adult and youth participants during FY:92-1 achieved knowledge, skills and dietary improvements similar to those of p years. This indicates that increased teaching in groups has not compromi program results.

In FY:96, an expanded version of the national adult currriculum (ERIB3) w implemented. The expansion included lesson plans, learning activities, participant handouts, tested recipes and visual displays for teaching individuals and groups.

In October 1995, each EFNEP unit in North Carolina began reporting locall using the EFNEP Evaluation/Reporting System (ERS). In previous years, EF data were reported in UNIX, then were compiled and transferred to ERS in state office.

Grant funding for cooperative projects has allowed EFNEP to grow in sever directions. Through the ES/WIC initiative, Wake County Department of Hea and Smart Start funds, ten counties have participated in breast-feeding s projects. In five years, over 5800 WIC clients in both urban and rural se had received in-home breast-feeding support through EFNEP. Results showe increased numbers of mothers choosing to breast-feed, and a significant increase in breast-feeding duration. Similar results were reported in Mi where the North Carolina breast-feeding support model was implemented thr the ES/WIC initiative.

ES/WIC grant funds also supported a special program for pregnant teenagers allowing for development of a curriculum (Hey, What's Cookin'") which emphasized experiential learning and skills development. After field test and evaluation of the curriculum, it was introduced in training to all EFN staff early in FY:95. Since then, over 2000 were enrolled, bringing the five-year total to more than 4000 pregnant teenagers being worked with in EFNEP.

Future funding for EFNEP is of critical concern. While some growth of the special projects (breast-feeding and pregnant teen programs) is possible through state Smart Start, Health Department and private foundation grant funds, maintaining the current level of EFNEP will be possible only by leveraging additional local support. This process is already underway. An additional resource for reaching disadvantaged audiences is the Family Nutrition program, "Out for Lunch", which targets mothers and pre-schoolers qualify for food stamps. This program, which was implemented during FY:96 resulted in an increased capacity to reach food stamp recipients in EFNEP

G. Coordinators and Team Members

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SUCCESS STORIES

At a special school for pregnant and parenting teens, EFNEP was linked with a local Teenage Pregnancy Services (TAPS) program to bring the "Hey What's Cookin'" curriculum to 168 pregnant teens. Hands-on learning is provided in kitchen facilities to give teens the opportunity to develop food preparation and meal planning skills and safe food handling.

After five teens participated in a Food Preservation and Safety Training program, they taught 35 youth proper food handling and food safety procedures.

In one county which enrolled 21 pregnant teens in the "Hey, What's Cookin'" program, those who failed to meet desirable birthweight standards two young women who joined the class very late in the pregnancy. Given differences in costs between a healthy-weight ($4,720) and a low birthweight

premature delivery (ranging from $11,670 to $39,420) saving in medical bi
for the 19 healthy-weight deliveries was at minimum $7,000 per delivery (
$133,000).

In a rural county in western North Carolina, a young homemaker was referred to EFNEP from the Department of Social Services. At that time, was pregnant and was about to lose custody of her older children because unsanitary conditions in the home. Her first EFNEP lessons were on food safety. The EFNEP Program Assistant gave her extra support during the pr of her children being placed in a temporary shelter. That support contin when the baby was born prematurely and with an abnormal heart condition a mother needed to learn how to provide the special care involved. The mot was so grateful for the help she received at a critical time that she nam baby after the EFNEP Program Assistant.

The mother is now self-sufficient, is working at a fast-food restaur Agency personnel applaud the EFNEP experience for their client because sh learned how to provide safe food for her family and has her children livi home again.

Re-entry Program for Youth

Mecklenburg County youth Program Assistant has regular Saturday morning c with youth ages 13-18, who are residents in the Elon Home for Children. through Social Services, the young people have had to be removed from hom their own safety and well being. During the week the school cafeteria se the residents their meals. However, during the weekends the young people been supplied with brown bag meals or tried to prepare meals within their respective cottages. Through a contact with the director, 4-H EFNEP has become the Saturday morning feature. First overcoming the perception tha classes were punishment, the Program Assistant reports that the youth are reporting about their successes and attempts to do some of their own cook The Program Assistant has also seen a real positive change in their self- and willingness to try new foods and combinations. Designed around hands- active involvement and kitchen table talks, the young people are learning to choose foods from the pyramid and how to prepare them. Development of preparation skills and how to plan a balanced diet could prove to be vita this audience as they re-enter their family situation. However, in addit this particular situation has also demonstrated to the participants that can work and live together as a team and have fun doing it.

Year Round Schools

North Carolina is developing more and more year round schools. As a rule is a three week track between sessions during which many children are inv in a program called extended day learning. 4-H EFNEP Program Assistants Mecklenburg County have become an intergral part of the curriculum offere during the three week tracks. Working with the young people on a daily b using "Professor Popcorn" as the core curriculum, the effort has reached students with food guide pyramid experiences. The classes are held daily week or scheduled throughout the track which offers frequent encounters w the young people and the opportunity to build on previous experiences.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

EFNEP families will acquire the knowledge, skills, attitudes and chang behavior necessary for nutritionally sound diets and to contribute to

personal development.

INDICATOR 1

In the table below, enter the total number of EFNEP families who participated in programs to improve diet, and the percentage of those families who actually improved their diets.

6yr Proj	8000	90.0

	Number EFNEP Families Participating	Percentage Improving Diets
1992	3054	88.0
1993	3955	87.0
1994	4088	88.0
1995	4769	91.0
1996	5774	94.0
1997	0	0.0
Total	21640	

Data Collection Methodology

EFNEP data management records.

INDICATOR 2

In the table below, enter the total number of EFNEP families who participated in programs to increase their knowledge of the essentials of human nutrition, and the percentage of those families who actually increased their knowledge.

6yr Proj	25000	80.0

	Number EFNEP Families Participating	Percentage Increasing Knowledge
1992	6179	86.0
1993	4618	89.0
1994	5438	97.0
1995	8635	79.0
1996	8657	94.0
1997	0	0.0
Total	33527	

Data Collection Methodology

EFNEP data management records.

INDICATOR 3

In the table below, enter the total number of EFNEP families who participated in programs to increase their ability to select and buy food that satisfies nutritional needs, and the percentage of those families who actually improved food selection.

6yr Proj	15400	90.0

	Number EFNEP Families Participating	Percentage Increasing Ability
1992	0	0.0
1993	3832	78.0
1994	4322	83.0
1995	6959	87.0
1996	5770	85.0
1997	0	0.0
Total	20883	

Data Collection Methodology
EFNEP data management records.

INDICATOR 4

In the table below, enter the total number of EFNEP families who participated in programs to improve practices in food production, food preparation, storage, safety and sanitation, and the percentage of those families who improved practices.

6yr Proj	15000	80.0

	Number EFNEP Families Participating	Percentage Improving Practices
1992	0	0.0
1993	3804	72.0
1994	4331	79.0
1995	6682	81.0
1996	5539	80.0
1997	0	0.0
Total	20356	

Data Collection Methodology
EFNEP data management records.

INDICATOR 5

In the table below, enter the number of EFNEP families who participated in programs to increase their ability to manage food budgets and related resources (such as Food Stamps), and the percetage of those families who actually improved food management skills.

6yr Proj	18700	67.0

	Number EFNEP Families Participating	Percentage Increasing Ability
1992	6179	63.0
1993	3792	69.0
1994	3317	74.0

1995	5162	82.0
1996	5045	81.0
1997	0	0.0
Total	23495	

Data Collection Methodology
EFNEP data management records.

OBJECTIVE 2
4-H EFNEP youth will acquire the knowledge, skills, attitudes and changed behavior necessary for nutritionally sound diets and to contribute to their personal development.

INDICATOR 1
Enter the number of EFNEP youth who participated in programs to eat a variety of foods, and the percentage of those youth who actually eat a variety of foods.

6yr Proj	26000	63.0

	Number EFNEP Youth Participating	Percentage Increasing Variety
1992	6295	87.0
1993	3952	70.0
1994	5301	71.0
1995	8479	90.0
1996	5710	90.0
1997	0	0.0
Total	29737	

Data Collection Methodology
EFNEP data management records.

INDICATOR 2
In the table below, enter the number of EFNEP youth who participated in programs to increase their knowledge of the essentials of human nutrition, and the percentage of those youth who actually increased their knowledge.

6yr Proj	26000	80.0

	Number EFNEP Youth Participating	Percentage Increasing Knowledge
1992	6295	87.0
1993	5399	75.0
1994	6076	83.0
1995	6517	91.0
1996	5710	89.0
1997	0	0.0
Total	29997	

Data Collection Methodology
EFNEP data management records.
INDICATOR 3
In the table, enter the total number of EFNEP youth who participated in programs to increase their ability to select low-cost, nutritious foods, and the percentage of those youth who actually improved food selection.

6yr Proj	22000	50.0

	Number EFNEP Youth Participating	Percentage Increasing Ability
1992	4155	87.0
1993	3631	64.0
1994	5301	74.0
1995	6856	82.0
1996	5468	81.0
1997	0	0.0
Total	25411	

Data Collection Methodology
EFNEP data management records.
INDICATOR 4
In the table, enter the number of EFNEP youth who participated in programs to improve practices in food preparation and safety, and the percentage of those youth who demonstrated improvement.

6yr Proj	21000	50.0

	Number EFNEP Youth Participating	Percentage Improving Practices
1992	4155	87.0
1993	1868	58.0
1994	5301	66.0
1995	7709	77.0
1996	5384	78.0
1997	0	0.0
Total	24417	

Data Collection Methodology
EFNEP data management records.
Survey to track eating patterns

OBJECTIVE 3
EFNEP State programs will increase interagency cooperation.
INDICATOR 1
Enter the number of WIC offices within EFNEP communities and the percent whose clients are served by EFNEP.

6yr Proj	70	100.0

	Number of WIC Offices	Percent Served by EFNEP
1992	35	100.0
1993	63	75.0
1994	70	100.0
1995	74	100.0
1996	74	100.0
1997	0	0.0
Total	316	

Data Collection Methodology
EFNEP data management records.

INDICATOR 2

Enter the number of Food Stamp offices within EFNEP communities and the percent whose clients are served by EFNEP.

6yr Proj	43	100.0

	Number of Food Stamp Offices	Percent Served by EFNEP
1992	35	100.0
1993	43	91.0
1994	41	88.0
1995	45	100.0
1996	45	100.0
1997	0	0.0
Total	209	

Data Collection Methodology
EFNEP data management records.

INDICATOR 3

Enter the number of formal agreements and/or coalitions with public or private organizations providing assistance to limited resource audiences.

6yr Proj	2

	Number of Agreements/ Coalitions
1992	21
1993	58
1994	79
1995	153

1996	81
1997	0
Total	392

Data Collection Methodology
EFNEP data management records.

INDICATOR 4

Enter the amount of money (in dollars) obtained by grants, contributions or other sources to supplement Federal EFNEP allocations.

6yr Proj	20000

	Non-Federal Dollars Obtained
1992	33542
1993	24949
1994	193385
1995	807500
1996	452840
1997	0
Total	1512216

Data Collection Methodology
EFNEP data management records.

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	2500000
1993	2500000
1994	2500000
1995	2500000
1996	2500000
1997	2500000
Total	15000000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other

1992	8.0	0.0	0.0	73.0	0.0	0.0
1993	11.0	0.0	0.0	81.0	0.0	0.0
1994	11.0	0.0	0.0	81.0	0.0	0.0
1995	11.0	0.0	0.0	81.0	0.0	0.0
1996	11.0	0.0	0.0	82.3	0.0	0.0
1997	11.0	0.0	0.0	79.0	0.0	0.0
Total	63.0	0.0	0.0	477.3	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	2000
1993	2000
1994	2000
1995	2000
1996	2000
1997	2000
Total	12000

ADDITIONAL COMMENTS

PROGRAM CONTACTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
FARM SAFETY(08)

NARRATIVE SUMMARY OF ACCOMPLISHMENT

Agriculture is one of the nations's most dangerous occupations. North Ca agricultural workers, like those nationwide, suffer a large share of deat injuries, and illnesses compared to workers in other professions. These risks not only affect the agricultural workers, but also impose an added on their families and communities. By providing current information on agricultural safety and health to our workers, educators, and health professionals, we can improve agricultural productivity and enhance the h and safety and future of the agricultural industry in North Carolina. Education is an invaluable assest in changing agricultural families, communities, and workers safety attitudes which are employed in the vario aagricultural tasks on the farm. Nineteen students at North Carolina Sta UUniversity have enrolled in BAE 432 class entitled "Agricultural and Environmental Safety and Health" which is designed to provide the student an opportunity to explore various aspects of agriculture and the enviromer with an emphasis on safety and health. Farm machinery victim extrication programs were held in 10 counties involving 500 farmers, emergency rescue personnel and fire department personnel.

SUCCESS STORIES

Students in the Department of Biological and Agricultural Engineering hav opportunity to learn the latest safety and health curriculum in BAE 432 " Agricultural and Environmental Safety and Health " class offered for the Fall Semester. This class will provide the students an opportunity to ex various aspects of agriculture and the environment with an emphasis on sa and health. The enviromental impact of agriculture with respect to human safety will be explored. They will also learn to apply safety management principles to agricultural and environmental occupation, develop an aware of agriculture's impact on human health and safety and apply techniques f hazard recognition and evaluation and implement appropriate control strat

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Extension will promote farm safety awareness and adoption of safe farming practices.

INDICATOR 1

Enter the number of participants in educational programs.

6yr Proj	51500

	Number of Program Participants
1992	3500
1993	16300
1994	17200
1995	14000
1996	15000

1997	0
Total	66000

Data Collection Methodology

taff reports.

INDICATOR 2

Enter the number of requests for farm safety materials.

6yr Proj	8000

	Requests for Farm Safety Materials
1992	750
1993	715
1994	1500
1995	5000
1996	4500
1997	0
Total	12465

Data Collection Methodology

Staff reports.

INDICATOR 3

Enter the number of Extension clientele adopting one or more safe farming practices.

6yr Proj	23000

	Clientele Adopting Practices
1992	95
1993	7137
1994	8000
1995	7500
1996	5500
1997	0
Total	28232

Data Collection Methodology

Data collection methods should reflect the total resources allocated to the individual state's farm safety program, and the most effective means of obtaining that data. It is recommended that measurement be obtained from a representative sample, and that this measure be used to estimate the total impact on all clientele taught. The number reported, therefore, will reflect the estimated

impact on all clientele taught.

OBJECTIVE 3

Farm workers, rescue and medical personnel will increase knowledge of appropriate injury prevention and accident response.

INDICATOR 1

Enter the number of clientele improving their knowledge of farm accident rescue procedures.

6yr Proj	10000

	Number Increasing Knowledge
1992	2800
1993	1541
1994	1800
1995	0
1996	500
1997	0
Total	6641

Data Collection Methodology

Pre- and post-test for professional rescue and medical personnel re education credit is recommended. Post-test questionnaires, surveys other equally effective means are recommended for all others.

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	987000
1993	987000
1994	987000
1995	987000
1996	950000
1997	950000
Total	5848000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	18.0	0.0	0.0	0.5	0.0	0.0

1993	18.0	0.0	0.0	0.5	0.0	0.0
1994	18.0	0.0	0.0	0.5	0.0	0.0
1995	18.0	0.0	0.0	0.5	0.0	0.0
1996	18.0	0.0	0.0	0.5	0.0	0.0
1997	18.0	0.0	0.0	0.5	0.0	0.0
Total	108.0	0.0	0.0	3.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	1600
1993	1600
1994	1600
1995	1600
1996	1600
1997	1600
Total	9600

ADDITIONAL COMMENTS

PROGRAM CONTACTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
INTEGRATED PEST MANAGEMENT(09)

NARRATIVE SUMMARY OF ACCOMPLISHMENT
IPM activities were conducted in over 70 counties involving alfalfa, apples, Christmas trees, corn, cotton, Irish potatoes, greenhouses, pastures, peanuts, small grains, soybeans, tobacco, turf, urban, vegetables, beef, swine, and poultry. Over 50 scouting schools and IPM training sessions were held with 3,500 grower participants. IPM on-farm demonstrations were conducted in cooperation with 300 growers on 145,000 acres.

Animal IPM programs continued with a vigorous effort to instruct industry personnel on improved pest management techniques. Over 220 poultry service technicians attended 11 meetings. This endeavor affects over 1,000 poultry growers accounting for 180 million birds, improving production methods, and reducing pesticide use. Our educational approach is to "train the trainer" with groups of service personnel undergoing instruction. This approach has immediate impact on pest management practices as industry service personnel can require changes in producer practices. For example, an improvement in pesticide application timing for the control of the lesser mealworm was adopted by 40% of service personnel as a standard practice required of their growers. Poultry IPM will continue to target integrated poultry production.

Fraser fir Christmas tree IPM programs continued to expand to include new growers. A new two county project involving 58 growers provided classroom and in-field instruction at 8 meetings. Two other scouting schools were held for growers not enrolled in the special project. Since Fraser fir are grown on mountain slopes a special emphasis of the IPM program has been protecting soil from erosion. The IPM program has developed a method of sod suppression where some weedy plants are allowed to grow under the trees. In the past growers were practicing a bare ground approach. In the new two county project 100% of the growers used the sod suppression method of weed control contributing to water quality efforts. One grower reported a 75% reduction in herbicides. The Fraser fir IPM effort has come full circle as a private consultant industry is in the beginning stages. One new consultant is in business with the North Carolina Cooperative Extension Service providing instruction to nine other individuals interested in becoming consultants. The Fraser fir IPM program has now spread to all major production counties. A survey of Fraser fir growers was conducted to determine the impact of the IPM program. Growers from three areas were chosen to participate. (1) Producers involved in an IPM demonstration, (2) producers in the county where an IPM demonstration was conducted but not a part of the program, and (3) growers in a county where an IPM program had not been introduced. Positive results were found for herbicide timing (use of postemergence as needed versus preemergence), use of a

hand lens to scout (several insect pests are difficult to identify without a hand lens), removing insect infested trees instead of spraying entire stands, and keeping field records of pests, treatment methods, and results. An additional emphasis of our educational efforts will center on treating individual fields with pesticides according to the situation as the survey revealed growers are still treating different plantings the same when they use pesticides. This survey demonstrated that targeted IPM programs can change producer attitudes and behavior in a positive manner.

Urban IPM efforts centered around instruction for municipal pest managers. Two, one-day, IPM programs were offered to pesticide decision makers who work in urban areas. Over 250 attended the offering. A printed guide "Integrated Pest Management for North Carolina Municipalities" was developed to provide students with continued guidance. Post-meeting surveys revealed over 85% of participants rated the meeting as good or excellent and 89% reported they intended to incorporate IPM principles into their practices. A world wide web site (http://ipmwwww.ncsu.edu/urban/cropsci/toc.html) was developed to allow access to urban IPM information by as many citizens as possible. Another means of getting IPM information to urban audiences is through the Master Gardener program. Special training was conducted for 58 MG in two counties in biological control, resistant varieties, and economic thresholds. Master Gardeners are a part of the turf IPM program also. In two counties Master Gardeners provide help with monitoring equipment that supply predictions of pest outbreaks. This computer based system has proven to help golf courses shift from scheduled pesticide treatments to as-needed applications. An example of the impact is a shift in species of mole cricket on golf courses. IPM programs have targeted the tawny mole cricket rather than the predaceous southern mole cricket. Now the southern mole cricket is the more prevalent species indicating the concentrated IPM effort has proven effective. Mosquito IPM educational efforts continue to show the disparity between citizen knowledge of this pest's biology and fact. In a citizen survey they ranked ditches and swamps as the areas with greatest potential for mosquito production. A study of flooded, discarded, man-made containers revealed that 64% contained mosquito larvae or eggs and were more likely to be the primary source of mosquitoes. This disparity in knowledge clearly shows that citizen education on pest biology/ecology is needed to direct efforts at non-pesticidal solutions to a pressing problem.

Reducing peanut production costs is critical to growers as the new farm bill reduces gross income by approximately $100/acre. IPM can contribute to grower profitability as pesticide costs are 20-30% of production outlays. A peanut grower survey shows that changing grower attitudes will be a challenge. Growers identified fear of crop failure and subsequent economic ruin as the major concern in adopting IPM. They also expressed a lack of confidence in their ability to monitor pests. Most felt they

were so diversified and stretched for time that they could not use IPM properly. IPM efforts focus on convincing growers to reconsider pesticide use practices that have become automatic over the years. At-planting herbicides and insecticides, disease treatments, and soil insecticides have been targeted as applications that can be changed to an as-needed basis. Peanut leafspot forecasting is an important part of this effort because fungicides have traditionally been applied on a scheduled 2-week basis. The forecasting system gives growers the information needed to treat only when conditions are favorable for disease development. All peanut producing areas have implemented a leafspot forecasting system resulting in 80% of the growers using the system to time fungicide applications. Half the peanut producing counties have upgraded to computer based forecasting system which will enhance accuracy and ease of use. Growers are contacted through a variety of ways from call-in messages to faxing results. This system saves peanut growers 1.5 - 2.5 treatments a year reducing the amount of pesticide applied by approximately 250,000 lbs. ai and $2.5 million annually. One large peanut growing county reports that the advisory system saves growers $2 million annually. Another reports their growers are saving $400,000.

Private consultants provide IPM services for many acres so maintaining close communication to exchange IPM information is important. Effective contact with private consultants is maintained with an Extension IPM computer based pest alert system and bulletin board. Through this system weekly pest updates by university extension specialists are posted. Consultants can post and read observations. To further insure close communications with consultants, an annual round table with NCSU faculty is held to provide a forum for idea interchange. The program is developed from consultant's suggestions. Twenty seven consultant's attended this year's round table which focused on improved scouting procedures for small grains. Another meeting with consultants addressed the role of Bt cotton in N.C. and changes in scouting procedures and thresholds. Twelve consultants indicated they used the information to work with clients who grow Bt cotton.

Apple IPM methods are changing as growers are asked to reduce or eliminate pesticide use. A survey identified grower confidence in their ability to scout and apply pest management as a major barrier to more widespread use of IPM. Part-time producers felt they would not have the time to use IPM evaluation methods. New approaches such as Bt insecticides and mating disruption must be evaluated under N.C. conditions. After careful testing in IPM on-farm trials the use of Bt insecticides in place of more toxic insecticides is being recommended to growers. This action will affect over 5,000 acres of apples. Growers must be convinced to make this change as there is no short-term economic incentive to make a change. The IPM program will have to provide convincing arguments to gain grower acceptance. Use of mating disruption for tufted apple bud moth has proven successful in other states

but is less useful in N. C. After intensive testing the conditions under which mating disruption can be used has be identified allowing some growers an option to scheduled insecticide treatments.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Clientele will increase use of recommended integrated pest management practices which involve alternatives to chemical pest controls, including rotations, biological controls and reduced pesticide use as shown in Extension demonstrations.

INDICATOR 1

Enter the number of farmers using IPM practices.

	Number of Farmers Using IPM
6yr Proj	300
1992	800
1993	2200
1994	4000
1995	24000
1996	3337
1997	0
Total	34337

Data Collection Methodology

Staff estimates.

INDICATOR 3

Enter the number of county and regional pest control demonstrations conducted.

	Number of County Demos.	Number of Regional Demos.
6yr Proj	10	0
1992	12	0
1993	21	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
Total	33	0

Data Collection Methodology

Staff reports.

OBJECTIVE 2

Private crop consultants will gain knowledge of integrated pest

management practices.

INDICATOR 1

Enter the number of consultants trained by Extension.

6yr Proj	15

	Consultants Trained by Extension
1992	25
1993	25
1994	25
1995	0
1996	283
1997	0
Total	358

Data Collection Methodology

Staff reports.

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	1625000
1993	1625000
1994	1625000
1995	1625000
1996	162500
1997	162500
Total	6825000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	25.0	0.0	0.0	20.0	0.0	0.0
1993	25.0	0.0	0.0	20.0	0.0	0.0
1994	25.0	0.0	0.0	20.0	0.0	0.0

1995	25.0	0.0	0.0	20.0	0.0	0.0
1996	35.0	0.0	0.0	0.0	0.0	0.0
1997	35.0	0.0	0.0	0.0	0.0	0.0
Total	170.0	0.0	0.0	80.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	200
1993	200
1994	200
1995	200
1996	200
1997	200
Total	1200

ADDITIONAL COMMENTS

PROGRAM CONTACTS

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Table IV
Pest Management Programs - Annual Report
FY - 96
State- NC

Commodities or Other Project Designations Program Costs ($):	1. row crops	2. animals	3. urban	4. fruit/veg	5. Forestry	Totals
1. Smith-Lever 3(d)	52,273	63,791	72,718	40,673	4,547	234,002
2. other CES funds	1,410,000	602,500	1,100,000	1,000,000	355,000	4,467,500
3. grower payments to:						
a. extension	35,000	0	0	5,000	5,000	45,000
b. consultants	7,500,000	0	0	100,000	0	7,600,000
c. grower organizations	70,000	0	0	10,000	0	80,000
4. others						
Acres or units handled by:						
1. CES programs	16,800	0	50,000	6,000	1,500	74,300
2. Private consultants/firms		310,000	1,000,000	20,000	0	1,330,000
3. Grower organizations/coops	35,000	0	0	0	0	35,000
4. industry fieldmen	25,000	5,000,000	0	10,000	1,000	5,036,000
5. others influenced by extension	2,700,000	100,000,000	1,000,000	25,000	2,000	103,727,000
CES Staff Years:						
1. State specialists	14	1.25	6	8	3.5	33
2. Multi-County Staff	6.5	4.5	8	6	1.5	27
3. County Staff	15	12	16	12	4	59
Number of Scouts Trained:	661		330	5	9	1,005
Number of growers trained:	2,857	0	0	300	180	3,337
Number providing IPM services:						
1. Extension sponsored programs	68	0	10	8	6	92
2. Private consultants/firms	25	5	250	3	0	283
3. Grower organizations/coops	80	5	0	0	0	85
4. Industry fieldmen	70	250	0	15	5	340
5. Others influenced by extension	30,000					30,000

State advisory committee: one advisory committee for all commodities
No. people on committee 35
No. agencies and departments 8 NCSU depts.*, 3 agencies, 2 NGOs, 2 farmers, 2 private consultants
*research, extension, and teaching represented

NORTH CAROLINA 1996 ANNUAL REPORT:
PESTICIDE APPLICATOR TRAINING(10)

NARRATIVE SUMMARY OF ACCOMPLISHMENT

E. Narrative and Implications

North Carolina has 29,580 private pesticide applicators. During the five year period 10773 applicators were certified to use restricted use pesticides. Applicators can be certified by attending a 4 hour class with emphasis on new Federal Core manual. Five slide/tapes sets were prepared in North Carolina for this program. These lessons are (1) Pest Control/Labeling/Formulations, (2) Pesticides in the Environment, (3) Harmful Affects/Protective Clothing, (4) Handling/Missing/Applications and (5) Calibration/Transportation, Storage/Disposal. A sixth slide/tape sets covers Federal and N. C. Laws and Regulations. A second certification method involves filling in an Applying Pesticides Correctly Programmed Instruction Workbook and then meeting with the County Pesticide Coordinator for a 30 minute review and test. This manual is also used by applicators who fail to get re-certified and must pass a State Administered Test to get recertified. This manual was revised in 1994 and a chapter on the Worker Protection Standard was added.

Private pesticide applicators (farmers) must be re-certified every three years. Of the 29,580 applicators 25,560 were recertified during the 1994-96 period. Applicators are certified by attending a 2 hour class conducted by the County Pesticide Coordinator. In 1993-94, the program covered the Worker Protection Standard, Pesticide/Container Disposal, Farmer Record keeping, Preventing Ground/Surface Water Contamination, The Agricultural Health Study and Label Review. This is the fifth 3 year recertification cycle conducted for farmers. Every 3 years pertinent subjects and a current review of laws and regulations are covered. An Agricultural Healthy Study sponsored by the National Center Institute is being conducted in N. C. by SRA, Survey Research Associates, Inc. in Durham, N.C. The farmers are reached during the recertification meetings where they fill out an initial survey and take comprehensive pesticide use forms home for the grower and spouse to complete. Follow ups to check on farmer health and possible relationships with pesticide used will continue.

North Carolina has 8,810 commercial pesticide applicators, public operators and consultants. It has 1009 restricted use pesticide dealers. Seventhy-four two day schools were held across the State to train 5890 new applicators/dealers in 1992/96. One day was spend on core material Applying Pesticides Correctly and N. C. Federal Laws/Regulations and 1/2 day on the Specialty Subjects (Ornamental-Turf,

Structural, etc.) On the second afternoon the N. C. Department of Agriculture offers tests in all commercial applicator categories. In N. C. we have persons licensed as follows: Aquatic 348, Public Health 246, Forest 451, Right of Way 766, Regulatory 71, Ag. Animal 142, Ag. Plant 1483, Ornamental/Turf 4305, Seed 34, Demonstration & Research 612, Wood Treatment 82, Aerial 92, Structural 1106 and Dealers 1007. In addition to the 14 two-day schools 22 one-day schools were held for specialty groups such as Electric Power Companies, Public School Employees, Vo. Ag. Teachers, University Workers and others.

During 1992-96, 2510 recertification classes were held for over 9,000 commercial applicators, public operators, consultants and dealers. These applicators/dealers/consultants need 3-20 hours of recertification hours per 5 year period depending on licensing specialty and number of specialties in which they are licensed. These sessions are typically 1-3 hours in length but some offer up to 6 hours of credit. They are held on county, commodity and state meeting levels. Over 70 slide tapes sets and 109 video's are available for this type of training and are used in 40% of the classes.

250 special two hour worker Protection Standard Meetings for 10,100 employers are held in our 100 counties. WPS supplies were delivered to 100 counties and the agents trained to help employers train their handlers and workers. Extension will not train workers/handlers directly nor issue EPA verification cards. Certain agencies/groups will issue these cards after meeting N. C. Department of Agriculture training, testing and record keeping requirements.

Other pesticide applicator training activities involved an attempt to establish a pesticide container recycling program statewide, an agromedicine program (with Julia Storm, M. B. Genter, others) protective clothing workshops (with Jennings and Mock), water quality programs (with Humenik) safety programs (with McLymore) A manual "Dancing with Danger" for Spanish speaking workers (with Steve Derthick) pest management programs (with M. Liner and Patty Pritchard) impact assessment programs (with S. Toth), Master Gardener programs with (L. Bass) and aerial applicator programs (with S. Southern).

SUCCESS STORIES

A pesticide container recycling program has been developed in North Carol during the past 3 years (1994-96). We now have 67 of the 100 North Carol counties participating. In 1994, we recycled 60,000 containers and in 19 150,000 were recycled. The estimate for 1996 is over 200,000 containers.

Funds for this program are provided by a N. C. Environmental Trust Fund sponsored by a increase in pesticide registration fee from the Commercial Pesticide Companies selling products in the state. Start up money for th

counties is provided through NCDA collection sites, buildings, trailers, pressure rinse nozzles, protective equipment and other needs depending on local situation and needs.

Containers are picked up on a regular basis by SCT Environmental Inc. Th: operation is sponsored by the Agricultural Container Research Council (AC The funds are provided on a national basis by the major pesticide compani

The N. C. Cooperative Extension Service and the N. C. Department of Agric provides the necessary educational and operational support for the recycl programs. For example, during 1996 four regional workshops were held to 80 county pesticide coordinators who serve as site coordinators for the c programs.

John Wilson
Pesticide Coordinator/NCSU
Mitch Peele
Pesticide Specialist/NCDA

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Pesticide applicators improve their knowledge and attitudes.

INDICATOR 1

Number of trainees attending PRIVATE applicators training for certification or recertification.

6yr Proj	9000	34000
	Trainees Attending for Certification	Trainees Attending for Recertificat.
1992	1248	9228
1993	520	9248
1994	3225	9450
1995	3980	5560
1996	3645	5580
1997	0	0
Total	12618	39066

Data Collection Methodology
Program records.

INDICATOR 2

Number of trainees attending COMMERCIAL applicators training for certification or recertification.

6yr Proj	5000	10500
	Trainees Attending for Certification	Trainees Attending for Recertificat.
1992	993	2213

1993	1404	3201
1994	1350	4000
1995	1143	852
1996	1250	1110
1997	0	0
Total	6140	11376

Data Collection Methodology
Program records.

INDICATOR 3
Number of trainees trained, other than in the previous two tables, as required by state regulations (e.g., Registered Technician).

6yr Proj	1000

	Number of Trainees
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

Data Collection Methodology
Program records.

INDICATOR 4
Number of Extension clientele obtaining pesticide education (i.e., urban gardeners, IPM) NOT through traditional certification training.

6yr Proj	15300

	Number of Trainees
1992	0
1993	5000
1994	5000
1995	5000
1996	5000
1997	0
Total	20000

Data Collection Methodology
Program records.

INDICATOR 5

PRIVATE APPLICATOR TRAINING MATERIALS (Table 1 of 2)

Specify training materials developed or updated in the following areas (enter "N" for new materials and "U" for updated materials).

6yr Proj	na	u	na	na
	Agriculture (Plant)	Agriculture (Animal)	Vegetable	Small Fruit
1992				
1993		u		
1994	N			
1995	u			
1996				
1997				

Data Collection Methodology
Program records.

INDICATOR 6

PRIVATE APPLICATOR TRAINING MATERIALS (Table 2 of 2)

Specify training materials developed or updated in the following areas (enter "N" for new materials and "U" for updated materials).

6yr Proj	na	u	na	n--aquatic
	Chemigation	Greenhouse/ Nursery	Fumigation	Other
1992				
1993				u
1994				
1995				n
1996				
1997				

Data Collection Methodology
Program records.

INDICATOR 7

COMMERCIAL APPLICATOR TRAINING MATERIALS (Table 1 of 4)

Specify training materials developed or updated in the following categories (enter "N" for new materials and "U" for updated materials).

6yr Proj	N	U	
Agriculture (Plant)	Agriculture (Animal)	Forest	Ornamental and Turf

1992				
1993		u		
1994		N (2)	N	
1995	u			
1996				
1997				

Data Collection Methodology
Program records.

INDICATOR 8
COMMERCIAL APPLICATOR TRAINING MATERIALS (Table 2 of 4)

Specify training materials developed or updated in the following categories (enter "N" for new materials and "U" for updated materials).

6yr Proj	na	n	na	na
	Seed Treatment	Aquatic	Right-of-way	Non-ag. Industrial
1992				
1993		u	u	u
1994				
1995				u
1996				
1997				

Data Collection Methodology
Program records.

INDICATOR 9
COMMERCIAL APPLICATOR TRAINING MATERIALS (Table 3 of 4)

Specify training materials developed or updated in the following categories (enter "N" for new materials and "U" for updated materials).

6yr Proj	na	n	na	u
	Non-ag. Institutional	Non-ag. Structural	Non-ag. Health Related	Public Health
1992				
1993		u		
1994				
1995				
1996				
1997				

Data Collection Methodology
Program records.

INDICATOR 10

COMMERCIAL APPLICATOR TRAINING MATERIALS (Table 4 of 4)

Specify training materials developed or updated in the following categories (enter "N" for new materials and "U" for updated materials).

6yr Proj	N	na	na
	Regulatory	Demonstration	Other
1992			
1993			u
1994			
1995	u		u
1996			
1997			

Data Collection Methodology
Program records.

INDICATOR 11
Enter the number and approximate FTEs of STATE SPECIALISTS involved in training and in developing materials (enter numbers reflecting only staff involved in PAT work).

6yr Proj	45	6.0	9	1.:
	Specialists Training (Number)	Specialists Training (FTE)	Specialists Develop. Mat. (Number)	Specialist: Develop. Mat (FTE
1992	0	0.0	0	0.(
1993	15	2.0	4	0.!
1994	15	2.0	3	0.!
1995	15	2.0	2	0.:
1996	14	1.9	1	0.:
1997	0	0.0	0	0.(
Total	59	7.9	10	1.:

Data Collection Methodology
Program records.

INDICATOR 12
Enter the number and approximate FTEs of COUNTY/AREA AGENTS involved in training (enter numbers reflecting only staff involved in PAT work).

6yr Proj	310	15.0
	Agents Training (Number)	Agents Training (FTE)

1992	0	0.0
1993	100	5.1
1994	100	5.0
1995	100	4.0
1996	100	4.8
1997	0	0.0
Total	400	18.9

Data Collection Methodology
Program records.

OBJECTIVE 2
Pesticide applicators use safe, environmentally sound pesticide practices.

INDICATOR 1
Enter the number of pesticide applicator trainees who adopted different pesticide-use practices as a result of PAT.

6yr Proj	28000

	Number of Trainees Adopting
1992	0
1993	9248
1994	9100
1995	9220
1996	8802
1997	0
Total	36370

Data Collection Methodology
Follow-up survey.

INDICATOR 2
Specify the practices adopted by private and commercial applicators. Identify private and commercial separately.
1996 ACTUAL RESULT(S)

Data Collection Methodology
Follow-up survey.

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	200000
1993	225000
1994	250000
1995	275000

1996	250000
1997	250000
Total	1450000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	11.6	0.0	0.0	0.0	0.0	0.0
1993	11.6	0.0	0.0	0.0	0.0	0.0
1994	11.6	0.0	0.0	0.0	0.0	0.0
1995	11.6	0.0	0.0	0.0	0.0	0.0
1996	11.6	0.0	0.0	0.0	0.0	0.0
1997	11.6	0.0	0.0	0.0	0.0	0.0
Total	69.6	0.0	0.0	0.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

ADDITIONAL COMMENTS

PROGRAM CONTACTS
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NORTH CAROLINA 1996 ANNUAL REPORT:
PESTICIDE IMPACT ASSESSMENT(11)

NARRATIVE SUMMARY OF ACCOMPLISHMENT
1. Surveys of Pesticide Usage on North Carolina Agricultural Crops

Conducted mail surveys of 940 sweetpotato producers in 17 counties, 1,115 cotton producers in 18 counties, 281 tomato producers in 25 counties, approximately 3,000 poultry producers in 54 counties, 95 potato producers in 14 counties, 936 Christmas tree producers in 24 counties, and 1,036 peanut producers in 13 counties in North Carolina to determine pesticide use patterns on sweetpotatoes in 1991, cotton in 1992, tomatoes and poultry (i.e., broilers, broiler breeders, egg layers and turkeys) in 1993, potatoes and Christmas trees in 1994, and peanuts in 1995. Data on herbicides, insecticides, miticides, nematicides, fungicides, rodenticides, disinfectants, growth regulators, and/or nonchemical pest management practices used by sweetpotato, cotton, tomato, poultry, potato, Christmas tree and peanut producers were collected and stored in a database along with pesticide use data for the 1988 peanut crop, 1989 potato and flue-cured tobacco crops, and 1990 apple and cucumber crops. Information in the database includes the chemical and nonchemical pest management alternatives used, percentage of acreage treated with the alternatives, application rates, number of applications, methods of application, costs of application, and yield and quality effects of alternatives. The database is used to respond to inquiries for pesticide use data from the USDA's NAPIAP and other organizations. The database also serves to document the acceptance and implementation of integrated pest management (IPM) by growers in North Carolina and to evaluate extension and research programs in the state.

2. Pesticide Benefit/Use Assessments

Provided information to USDA's NAPIAP on the benefits and uses of methyl bromide on tobacco (plant beds), broccoli, cauliflower, apples, eggplant, melons, peppers, strawberries, tomatoes (plant beds and fields), forest tree transplants, ornamentals, stored tobacco and peanuts, and field corn in North Carolina. Extension specialists in the state participated in the NAPIAP five-state benefits assessment of methyl bromide, attending a regional meeting held in Columbia, South Carolina on April 28, 1992. The benefit/use information on methyl bromide submitted to the NAPIAP was included in a USDA publication on the economic effects of banning methyl bromide for soil fumigation.

Data on the efficacy of propargite and other miticides for mite control on apples in North Carolina were submitted on April 4, 1996 in response to a request from the NAPIAP. The data were provided by James F. Walgenbach, Extension Entomologist, North Carolina State University. Kenneth A. Sorensen, Extension Entomologist, North Carolina State University, served as chairman of the NAPIAP Strawberry Assessment Team. Data to support the FY 1997 Pest Management Alternatives Program were solicited from C. W. Averre, W. O. Cline, D. W. Monks, K. A. Sorensen, T. B. Sutton and J. F. Walgenbach for submission to NAPIAP.

3. Pesticide Product Registration Information

Provided extension and research personnel in North Carolina with current information on pesticide products registered with the U. S. Environmental Protection Agency and North Carolina Department of Agriculture via the National Pesticide Information Retrieval System (NPIRS). A total of 180 NPIRS searches were performed from 1992-1996. Information retrieved was used by extension and

research personnel to assist North Carolina growers with the management of pests.

4. Information on Pesticide Issues and Programs

Prepared and distributed a pesticide newsletter containing information on pesticide registration, use and safety. Thirty-four issues of the newsletter were mailed to approximately 250 persons from 1992-1996. The newsletter was also distributed to state and county extension personnel on a statewide extension electronic news network and an undetermined audience on the internet (World Wide Web) from 1994-1996. Pesticide information, including notices from the NAPIAP's Reregistration Notification Network, was distributed on the statewide extension electronic news network. Sixty-six articles were posted on the network from 1992-1996. A fact sheet describing pesticide-related extension electronic and research programs in North Carolina was prepared and distributed to 100 county extension centers, extension specialists and researchers, North Carolina Department of Agriculture personnel, growers, commodity organizations, other interested persons, and an undetermined audience on the internet. State and county extension personnel, growers, commodity organizations, pesticide dealers, agricultural consultants and others were educated on pesticide issues and programs through newsletters, electronic news articles and fact sheets.

5. Information on Pest Management Practices Used in North Carolina

Educational displays containing information on insecticide use on the 1990 apple crop, 1990 cucumber crop, 1991 sweetpotato crop, 1992 cotton crop, 1993 poultry crop and 1994 potato crop in North Carolina and pest management practices used in the production of agricultural crops in North Carolina were presented at eight professional meetings and more than 20 state and county grower meetings. Three extension bulletins containing pesticide use information collected through surveys of peanut, potato and cucumber growers in North Carolina, three fact sheets containing pesticide use information collected in the survey of cotton, poultry and potato growers, a fact sheet containing information on pest management practices in the production of agricultural crops in North Carolina collected through grower surveys, and a fact sheet containing information on the National Agricultural Pesticide Impact Assessment Program were published and distributed to state and county extension personnel, the USDA's NAPIAP, growers, commodity organizations and other interested persons. These educational displays, extension bulletins and fact sheets informed scientists, growers, the NAPIAP and others on the use of pesticide and nonchemical pest management practices on North Carolina agricultural crops.

6. Educational Publications for NAPIAP State Liaison Representatives

Sixteen publications relating to pesticide use and safety, pest management, and crop production were purchased and distributed to NAPIAP state liaison representatives in 50 states, 5 U. S. territories, and the District of Columbia from 1994-1996. The publications provided the NAPIAP state liaison representatives with knowledge of these subjects. Eight Southern Region Pesticide Impact Assessment program pesticide fact sheets were edited, printed and distributed to each state and territory in the Southern Region. A total of 13,000 copies of each fact sheet were printed and 850 copies were mailed to each state and territory in the the region. The fact sheets were also made available on the internet. Copies of the fact sheets have been mailed to more than 100 persons and organizations requesting them by mail, telephone, fax or electronic mail.

7. National Pesticide Impact Assessment Workshop

Developed, in cooperation with the USDA Extension Service and other USDA agencies, a National Pesticide Impact Assessment Workshop to train state NAPIAP personnel on the NAPIAP benefits assessment process and discuss the respective roles of federal and state NAPIAP personnel in the process. A total of 100 persons from 45 states, Guam, Puerto Rico and the District of Columbia received training at the workshop held on February 26-27, 1992 in Raleigh, North Carolina. Proceedings of the workshop were published and distributed to workshop participants, state and federal NAPIAP personnel, and other interested persons.

8. Evaluation of Pesticide Benefits Assessment Computer Model

Evaluated the Pesticide Benefits Assessment (PBA2) computer model for its potential use in NAPIAP pesticide benefits assessments. Pesticide benefit/use data for apples, cucumbers and peanuts were used to evaluate the model. This model is currently being used in assessments of pesticide benefits by the NAPIAP.

SUCCESS STORIES

The pesticide use database maintained by the North Carolina Pesticide Impact Assessment Program was recognized as a source of accurate pesticide use data by a subcommittee of the North Carolina Pesticide Board's Pesticide Advisory Committee. The North Carolina Pesticide Board is considering a recommendation by the North Carolina Center for Public Policy that the North Carolina Department of Agriculture compile accurate data on the amounts of pesticides used in the state. Also, the database will provide baseline data on the use of pesticides and non-chemical pest management practices for two federally-funded projects at North Carolina State University which will evaluate the success of IPM implementation by North Carolina apple and peanut growers.

A number of pesticide-related educational publications produced by the North Carolina Pesticide Impact Assessment Program have been formatted and placed on the internet (World Wide Web) which has greatly expanded the audience for these publications. Available on the internet are the "Pesticide Broadcast" newsletter, six pesticide fact sheets, and eight Southern Region Pesticide Impact Assessment Program pesticide fact sheets. The internet versions of these publications are located on the North Carolina component of the National Integrated Pest Management Network. A home page for the North Carolina Pesticide Impact Assessment Program is currently being developed at North Carolina State University.

SPECIAL FUNDS ABSTRACTS

Stephen J. Toth, Jr. A Survey of Pesticide Use on Cotton in North Carolina. $16,614. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program (Project # 92-EPIX-1-0071).

Stephen J. Toth, Jr. A Survey of Pesticide Use on Poultry and Tomatoes in North Carolina. $20,223. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program (Project # 93-EPIX-1-0130).

Stephen J. Toth, Jr. Purchase, Production, and Distribution of Pesticide-Related Educational Materials. $61,366. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program (Project # 93-EPIX-1-0145).

Stephen J. Toth, Jr. A Survey of Pesticide Use on Potatoes and Christmas Trees in North Carolina. $20,501. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program (Project # 94-EPIX-1-0174).

Stephen J. Toth, Jr. A Survey of Pesticide Use on Peanuts in North Carolina. $23,176. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program (Project # 95-EPIX-1-0222). Abstract: Comprehensive data on pesticide use/benefits in peanut production in North Carolina are needed due to the economic importance of peanuts in the State. A mail survey of producers will be conducted to obtain data on their pesticide use during 1995. Additional pesticide use/benefit data will be furnished by extension specialists at North Carolina State University.

H. Michael Linker. An IPM Analysis of NAPIAP Surveys. $22,000. USDA/Extension Service National Agricultural Pesticide Impact Assessment Program. Abstract: A direct linkage between IPM adoption and non-chemical pest management should be established. Information collected for NAPIAP urveys contain data that may be helpful in finding this linkage. NAPIAP data require careful analysis to determine the relationship between non-chemical use and IPM. This project is designed to identify linkages by developing a detailed description of the IPM program for 3 crops (peanuts, potatoes and apples) and using previous NAPIAP survey data to analyze non-chemical pest management activities.

Ross B. Leidy and Stephen J. Toth, Jr. Pesticide Impact Assessment Research and Extension in North Carolina. $55,616. USDA/Cooperative State Research, Education and Extension Service (Project # 96-EPIA-1-8136). Abstract: The U. S. Department of Agriculture (USDA) established the National Agricultural Pesticide Impact Assessment Program (NAPIAP) in 1976 to provide accurate and objective data to evaluate benefits and risks of selected pesticides having critical agricultural and forestry uses. Data generated were provided to the U. S. Environmental Protection Agency's pesticide registration and Special Review processes. NAPIAP involves the USDA and land grant university personnel in preparing documents on the biological and economic benefits of pesticides and supports state programs through selected funding. The North Carolina Pesticide Impact Assessment Program will support federal pesticide registrations important to the state agriculture through the collection of pesticide use data, notify the commodity and grower groups on actions which might impact, adversely, on their respective crops, inform state clientele and university scientists with NAPIAP-generated information and develop procedures to assess pesticide use in North Carolina. In addition, university scientists will be notified when NAPIAP research proposals become available and the potential to serve on NAPIAP Assessment Activity Teams.

Stephen J. Toth, Jr. Sweetpotato Pesticide Use Survey in North Carolina. $20,000. Southern Region Pesticide Impact Assessment Program (Project # 96-17-S-NC). Abstract: Comprehensive data on the use of pesticides and non-chemical pest management practices in sweetpotato production are needed to document pesticide benefits and implementation of IPM. North Carolina sweetpotato growers will surveyed by mail to obtain data on their methods of pest management in 1996. Additional pesticide use/benefit data will be collected from Extension specialists in the state. These data will be submitted to the NAPIAP and added to a pesticide use/benefit data base maintained in North Carolina. Extension and/or research publications containing information generated from the present and prior grower surveys will be prepared and distributed to interested parties, including growers, agricultural groups, government agencies and scientific organizations.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 3

Extension develops and maintains a pesticide usage database.

INDICATOR 1

List databases maintained and describe variables in each.

1996 ACTUAL RESULT(S)

Databases maintained;

Pesticide Usage/Benefits for North Carolina Agricultural Crops

Variables: Crops (peanuts, flue-cured tobacco, potatoes, apples, cucumbers sweetpotatoes, cotton, tomatoes, poultry, and Christmas trees); crop varie average yield; acres planted; acres harvested; target pests; herbicides, insecticides, miticides, nematicides, rodenticides, fungicides, growth regulators, and disinfectants used; nonchemical pest management practices (i.e., scouting, cultivation, resistant varieties, insect monitoring traps nematode sampling, crop rotation, soil testing, and others); percentage of acreage treated with pesticides; average number of applications of pestici per acre; treatment rates; treatment costs; yield and quality effects of pesticide used.

Data Collection Methodology
Program records.

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	106250
1993	106250
1994	106250
1995	106250
1996	106250
1997	106250
Total	637500

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	1.5	0.0	0.0	0.0	0.0	0.0
1993	1.5	0.0	0.0	0.0	0.0	0.0
1994	1.5	0.0	0.0	0.0	0.0	0.0
1995	1.5	0.0	0.0	0.0	0.0	0.0
1996	1.5	0.0	0.0	0.0	0.0	0.0
1997	1.5	0.0	0.0	0.0	0.0	0.0
Total	9.0	0.0	0.0	0.0	0.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
Total	0

ADDITIONAL COMMENTS

1. The following publications contain data generated from pesticide use surveys conducted by the North Carolina Pesticide Impact Assessment Program:

a. Bailey, J. E., Johnson, G. L., and Toth, S. J., Jr. 1994. Evolution of a weather-based peanut spot advisory in North Carolina. Plant Disease 78:530-535.

b. Toth, S. J., Jr., Duncan, H. E., Monks, D. W., Sorensen, K. A., and Wilson, L. G. 1993. Potato Pest Management 1989: A Survey of Pesticide Use and Other Pest Management Practices by North Carolina Potato Producers. AG-497. North Carolina Cooperative Extension Service, Raleigh. 20 pp.

c. Toth, S. J., Jr., Bailey, J. E., Brandenburg, R. L., Sullivan, G. A., York, A. C., and Linker, H. M. 1994. Peanut Pest Management 1998: A Survey of Pesticide Use by North Carolina Peanut Producers. AG-498. North Carolina Cooperative Extension Service, Raleigh. 20 pp.

d. Toth, S. J., Jr., Averre, C. W., Monks, D. W., Schultheis, J. R., and Sorensen, K. A. 1994. Cucumber Pest Management 1990: A Survey of Pesticide Use and Other Pest Management Practices by North Carolina Cucumber Producers. AG-499. North Carolina Cooperative Extension Service, Raleigh. 20 pp.

e. Toth, S. J., Jr., Wilson, J. H., Sheets, T. J., Bromley, P. T., James, P., Linker, H. M., Mock, J. E., Southern, P. S., and St. Clair, M. B. 1992. Pesticides: Extension and Research Programs in North Carolina. ENT/pia 1. Department of Entomology, North Carolina State University, Raleigh. 4 pp.

f. Toth, S. J., Jr. and Bacheler, J. S. 1995. Insecticide Use by North Carolina Cotton Growers in 1992. ENT/pia 2. Department of Entomology, North Carolina State University, Raleigh. 5 pp.

g. Toth, S. J., Jr. and Linker, H. M. 1995. Pest Management in the Production of Agricultural Crops in North Carolina. ENT/pia 3. Department of Entomology, North Carolina State University, Raleigh. 6 pp.

h. Toth, S. J., Jr. 1995. The National Agricultural Pesticide Impact Assessment Program. ENT/pia 4. Department of Entomology, North Carolina State University, Raleigh. 2 pp.

i. Toth, S. J., Jr. and Stringham, S. M. 1996. Insect Management by North Carolina Poultry Producers in 1993. ENT/pia 5. Department of Entomology, North Carolina State University, Raleigh. 4 pp.

j. Toth, S. J., Jr. and Sorensen, K. A. 1996. Insect Management by North Carolina Potato Growers in 1994. ENT/pia 6. Department of Entomology, North Carolina State University, Raleigh. 4 pp.

k. Toth, S. J., Jr. 1996. Federal Pesticide Laws and Regulations. Southern Extension and Research Activity - Information Exchange Group 1 (Southern Region Pesticide Impact Assessment Program). 4 pp.

2. The following educational displays were presented at professional meetings and state and county grower meetings:

a. Toth, S. J., Jr. and Walgenbach, J. F. Insecticide Use by North Carolina Apple Growers in 1990.

b. Toth, S. J., Jr. and Sorensen, K. A. Insecticide Use by North Carolina Cucumber Growers in 1990.

c. Toth, S. J., Jr. and Sorensen, K. A. Insecticide Use by North Carolina Sweetpotato Growers in 1991.

d. Toth, S. J., Jr. and Bacheler, J. S. Insecticide Use by North Carolina Cotton Growers in 1992.

e. Toth, S. J. and Linker, H. M. Pest Management in the Production of Agricultural Crops: Mail Surveys of North Carolina Growers.

f. Toth, S. J., Jr. and Stringham, S. M. Insect Management by North Carolina Poultry Producers in 1993.

g. Toth, S. J., Jr. and Sorensen, K. A. Insect Management by North Carolina Potato Growers in 1994.

3. The following educational seminars reporting pesticide use data generated by the North Carolina Pesticide Impact Assessment Program were presented:

a. Toth, S. J., Jr. Pesticides: Federal Laws, Impact Assessment and Agricultural Usage in North Carolina. Department of Entomology, Clemson University, Clemson, South Carolina. January 23, 1995.

b. Toth, S. J., Jr. The North Carolina Pesticide Impact Assessment Program. Department of Entomology, North Carolina State University, Raleigh. February 13, 1995.

PROGRAM CONTACTS

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NORTH CAROLINA 1996 ANNUAL REPORT:
RENEWABLE RESOURCE EXTENSION ACT(12)

NARRATIVE SUMMARY OF ACCOMPLISHMENT
Extension efforts resulted in a Governor's conference and task force on tl state of North Carolina's forests. The task force recommendations provid basis for the initiatives to be addressed by state agencies. Significant the Extension Service is the development of a Southern Center for Sustain Forests recognizing the importance of continuing education of professiona education of landowners, and establishment of cooperative efforts among industry, environmental organizations and state and federal agencies.

Water quality issues continue. Use of forestlands as disposal sites for waste and continuing concerns regarding forest management in wetland and coastal sites. Extension programs and efforts have educated over 400 landowners and professionals. A Coastal Zone Management Workshop will be the basis for consistent monitoring of forestry activities in the Southea

Utilization program efforts continue to reduce waste or loss of material. Layout advice resulted in an increase in production worth $140,000 per ye

Continuing education efforts in natural resources provided over 26,912 co hours. Workshops included collaborative problem-solving, wetlands issues herbicides, and others.

Environmental education efforts continue with the develop of additional materials for teachers in managing schoolyards, PLT, 4-H forestry and wil programs and others.

SUCCESS STORIES
Extension Wood Products Programs Making A Difference
There is a great need to increase the competitiveness and profitability o North Carolina's forest products industry and increase consumer understan of forest products and their proper use. To meet this need, extension specialists within the Department of Wood and Paper Science are actively involved in providing educational and technical assistance to North Carol forest products manufacturers and homeowners. A specialist worked with a sawmill in the area of equipment and mill layout. Based on his recommendations, production, grade recovery, and volume recovery are all Increased production is worth $140,000 per year. Another mill requested to improve their drying operations. Before Extension's visit, loss of ma due to split lumber was 12 percent. Following the specialist's advice on correct drying procedures, losses due to split lumber are now 0.4 percent specialist educated several homeowners about proper procedures to follow correcting moisture and mildew problems. Based on his recommendations an information, these homeowners were able to avoid unnecessary and expensiv treatments to solve their problems. Estimated savings are $5,000.

Natural Resources Leadership Institute is setting a model for other state providing a mechanism to work with individuals interested in natural reso on how to participate in collaborative problem-solving. The need to have groups and individuals collaboratively approach natural resources issues the development of this institute where participants attend 6 3-day sessi

and learn about facilitation, mediation, conflict resolution while develo positive working relationships with individuals having different perspect Each participant is also required to work on a practicum that addresses a natural resource issue in their job or community. The first class gradua June 1996 and their experience is credited with several improving effecti in their jobs or in addressing issues in their local area. The second cl currently working on practicums to be completed by June 1997. At least t other states are implementing a similar institute (Kentucky and Arkansas) several others in the planning stage.

Coastal Zone Management Workshops and BMP Monitoring Effectiveness Worksh are the basis for consistent implementation of monitoring in the Southeas United States. These workshops provided opportunities for agency and indu personal to collectively address the issue.

OBJECTIVES, INDICATORS, DATA COLLECTION METHODOLOGIES

OBJECTIVE 1

Renewable resource producing enterprises will enhance their economic viability. (Same as RREA Objective A, "Production")

INDICATOR 1

Enter dollars save or earned as a direct result of Extension FORESTLAND programs to enhance economic viability. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	156000000	0

	Actual Dollars Earned/Saved	Other Dollars Earned/Saved
1992	1386000	0
1993	3719700	0
1994	5258790	0
1995	5037280	0
1996	5053175	0
1997	0	0
Total	20454945	0

Data Collection Methodology

Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 3

Enter dollars saved or earned as a direct result of Extension FISH & WILDLIFE programs to enhance economic viability. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	610000	0

	Actual Dollars Earned/Saved	Other Dollars Earned/Saved
1992	16000	0

1993	102600	0
1994	230800	0
1995	250000	0
1996	250000	0
1997	0	0
Total	849400	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 5
Enter dollars saved or earned as a direct result of Extension EVIRONMENT & PUBLIC POLICY programs to enhance economic viability.
(Press F2 for definitions of "Actual" and "Other".)

6yr Proj	8000	0

	Actual Dollars Earned/Saved	Other Dollars Earned/Saved
1992	2000	0
1993	2000	0
1994	2000	0
1995	2000	0
1996	2000	0
1997	0	0
Total	10000	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

OBJECTIVE 2
Renewable resource products will be more efficiently utilized.
(Same as RREA Objective C, "Utilization")

INDICATOR 1
Enter dollars saved or earned as a direct result of Extension FORESTLAND programs to utilize resource products more efficiently.
(Press F2 for definitions of "Actual" and "Other".)

6yr Proj	1340000	0

	Actual Dollars Saved/Earned	Other Dollars Saved/Earned
1992	335000	0
1993	845000	0
1994	1000000	0
1995	500000	0
1996	500000	0
1997	0	0

Total	3180000	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)
INDICATOR 3
Enter dollars saved or earned as a direct result of Extension FISH & WILDLIFE programs to utilize resource products more efficiently. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	62000	0

	Actual Dollars Saved/Earned	Other Dollars Saved/Earned
1992	15500	0
1993	446000	0
1994	143600	0
1995	1455	0
1996	1500	0
1997	0	0
Total	608055	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)
INDICATOR 4
Enter dollars saved or earned as a direct result of Extension OUTDOOR RECREATION programs to utilize resource products more efficiently. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	40000	0

	Actual Dollars Saved/Earned	Other Dollars Saved/Earned
1992	10000	0
1993	153000	0
1994	111785	0
1995	5000	0
1996	500	0
1997	0	0
Total	280285	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)
INDICATOR 5
Enter dollars saved or earned as a direct result of Extension

programs ENVIRONMENT & PUBLIC POLICY programs to utilize resource products more efficiently. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	20000	0

	Actual Dollars Saved/Earned	Other Dollars Saved/Earned
1992	5000	0
1993	5000	0
1994	5000	0
1995	5000	0
1996	5000	0
1997	0	0
Total	25000	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

OBJECTIVE 3
Landowners/decisionmakers will be better able to act to protect and improve the environment on renewable resource lands through better information about the consequences of their actions. (Same as RREA Objective B, "Environmental Quality")

INDICATOR 1
Enter the number of acres protected but not enhanced or protected and also enhanced as a direct result of public policy educational programs concerning FORESTLAND. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	0	792000	0	(

	Actual Acres Protected	Actual Acres Enhanced	Other Acres Protected	Othe: Acre: Enhance
1992	0	198000	0	(
1993	0	635000	0	(
1994	0	372511	0	(
1995	0	168800	0	(
1996	0	144000	0	(
1997	0	0	0	(
Total	0	1518311	0	(

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 3
Enter the number of acres protected but not enhanced or protected and also enhanced as a direct result of public policy educational

programs concerning FISH & WILDLIFE. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	0	20000	0	

	Actual Acres Protected	Actual Acres Enhanced	Other Acres Protected	Other Acres Enhanced
1992	0	5000	0	
1993	0	65967	0	
1994	0	168249	0	
1995	0	1000	0	
1996	0	1000	0	
1997	0	0	0	
Total	0	241216	0	

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 4
Enter the number of acres protected but not enhanced or protected and also enhanced as a direct result of public policy educational programs concerning OUTDOOR RECREATION. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	0	8000	0	

	Actual Acres Protected	Actual Acres Enhanced	Other Acres Protected	Other Acres Enhanced
1992	0	2000	0	
1993	0	2000	0	
1994	0	906	0	
1995	0	4130	0	
1996	0	250	0	
1997	0	0	0	
Total	0	9286	0	

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 5
Enter the number of acres protected but not enhanced or protected and also enhanced as a direct result of public policy educational programs concerning ENVIRONMENTAL & PUBLIC POLICY. (Press F2 for definitions of "Actual" and "Other".)

6yr Proj	0	280000	0	

Actual	Actual	Other	Othe

	Acres Protected	Acres Enhanced	Acres Protected	Acres Enhanced
1992	0	70000	0	
1993	0	100000	0	
1994	0	133000	0	
1995	0	5000	0	
1996	0	12000	0	
1997	0	0	0	
Total	0	320000	0	

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

OBJECTIVE 4
Extension will provide continuing education to renewable resource professionals. (Same as RREA Objective E, "Continuing Education)

INDICATOR 1
Enter the number of contact hours of FORESTLAND training provided. (For explanation, press F2.)

6yr Proj	4000	0

	Classroom/ Workshop Contact Hours	Indirect Media, etc. Contact Hours
1992	1000	0
1993	1750	0
1994	2500	0
1995	1500	0
1996	24312	0
1997	0	0
Total	31062	0

Data Collection Methodology
Staff report of continuing education conducted or arranged by Extension. Also count exposure hours of professionals to Extension provided media designed to enhance professional competence.

INDICATOR 3
Enter the number of contact hours of FISH & WILDLIFE training provided. (For explanation, press F2.)

6yr Proj	2000	0

	Classroom/ Workshop Contact Hours	Indirect Media, etc. Contact Hours
1992	500	0
1993	500	0
1994	750	0

1995	500	0
1996	500	0
1997	0	0
Total	2750	0

Data Collection Methodology
Staff report of continuing education conducted or arranged by Extension. Also count exposure hours of professionals to Extension provided media designed to enhance professional competence.

INDICATOR 4
Enter the number of contact hours of OUTDOOR RECREATION training provided. (For explanation, press F2.)

6yr Proj	400	0

	Classroom/ Workshop Contact Hours	Indirect Media, etc. Contact Hours
1992	100	0
1993	125	0
1994	200	0
1995	150	0
1996	100	0
1997	0	0
Total	675	0

Data Collection Methodology
Staff report of continuing education conducted or arranged by Extension. Also count exposure hours of professionals to Extension provided media designed to enhance professional competence.

INDICATOR 5
Enter the number of contact hours of ENVIRONMENT & PUBLIC POLICY training provided. (For explanation, press F2.)

6yr Proj	3600	0

	Classroom/ Workshop Contact Hours	Indirect Media, etc. Contact Hours
1992	900	0
1993	1400	0
1994	2000	0
1995	2000	0
1996	2000	0
1997	0	0
Total	8300	0

Data Collection Methodology
Staff report of continuing education conducted or arranged by

Extension. Also count exposure hours of professionals to Extension provided media designed to enhance professional competence.

OBJECTIVE 5

Public (including youth) will improve understanding of renewable resource issues. (Same as RREA Objective D, "Environmental Education")

INDICATOR 1

Enter the total number of people, including youth, adopting environmentally appropriate practices after participation in Extension FORESTLAND programs and the total number of such practices they adopt. (For questions to ask, press F2.)

6yr Proj	204000	0	0	(

	People Adopting Actual	People Adopting Other	Practices Adopted Actual	Practices Adopted Other
1992	50970	0	0	(
1993	54650	0	0	(
1994	18760	0	0	(
1995	30420	0	0	(
1996	20500	0	0	(
1997	0	0	0	(
Total	175300	0	0	(

Data Collection Methodology

Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 3

Enter the total number of people, including youth, adopting environmentally appropriate practices after participation in Extension FISH & WILDLIFE programs and the total number of such practices they adopt. (For questions to ask, press F2.)

6yr Proj	42000	0	0	(

	People Adopting Actual	People Adopting Other	Practices Adopted Actual	Practices Adopted Other
1992	10515	0	0	(
1993	9265	0	0	(
1994	5129	0	0	(
1995	2196	0	0	(
1996	3050	0	0	(
1997	0	0	0	(
Total	30155	0	0	(

Data Collection Methodology

Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 4
Enter the total number of people, including youth, adopting environmentally appropriate practices after participation in Extension OUTDOOR RECREATION programs and the total number of such practices they adopt. (For questions to ask, press F2.)

	People Adopting Actual	People Adopting Other	Practices Adopted Actual	Practices Adopted Other
6yr Proj	6000	0	0	0
1992	1500	0	0	0
1993	900	0	0	0
1994	4688	0	0	0
1995	300	0	0	0
1996	250	0	0	0
1997	0	0	0	0
Total	7638	0	0	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

INDICATOR 5
Enter the total number of people, including youth, adopting environmentally appropriate practices after participation in Extension ENVIRONMENT & PUBLIC POLICY programs and the total number of such practices they adopt. (For questions to ask, press F2.)

	People Adopting Actual	People Adopting Other	Practices Adopted Actual	Practices Adopted Other
6yr Proj	20000	0	0	0
1992	5015	0	0	0
1993	11346	0	0	0
1994	13321	0	0	0
1995	14000	0	0	0
1996	11000	0	0	0
1997	0	0	0	0
Total	54682	0	0	0

Data Collection Methodology
Survey audience reached. (ES will provide questionnaire information later.)

ESTIMATED PROGRAM COST

Year	Est. Cost
1992	2000000

1993	2000000
1994	2000000
1995	2000000
1996	2000000
1997	2000000
Total	12000000

ESTIMATED FTE COMMITMENT

	Professional			Paraprofessional		
	1862	1890	Other	1862	1890	Other
1992	29.9	0.5	0.0	3.0	1.5	0.0
1993	29.9	0.5	0.0	3.0	1.5	0.0
1994	29.9	0.5	0.0	3.0	1.5	0.0
1995	29.9	0.5	0.0	3.0	1.5	0.0
1996	29.9	0.5	0.0	3.0	1.5	0.0
1997	29.9	0.5	0.0	3.0	1.5	0.0
Total	179.4	3.0	0.0	18.0	9.0	0.0

ESTIMATED VOLUNTEER PARTICIPATION

Year	Volunteers
1992	6900
1993	6900
1994	6900
1995	6900
1996	6900
1997	6900
Total	41400

ADDITIONAL COMMENTS

PROGRAM CONTACTS

Edwin J. Jones
Department Extension Leader
Department of Forestry
Box 8003
N. C. State University
Raleigh, NC 27695-8003
Voice phone: 919-515-5578
Fax phone : 919-515-6883
Electronic mail: Edwin_Jones@ncsu.edu

Annual Report for Calendar Year 1995
CR01 - Civil Rights Training

A. Goals

All employees of the North Carolina Cooperative Extension Service are expected to be aware of and comply with Civil Rights legislation. This includes the Americans with Disabilities Act.

All employees are to understand the human aspects of Civil Rights.

1. All employees are expected to be knowledgeable of the principles and laws of our nation regarding Civil Rights.

2. All employees are expected to be knowledgeable of Civil Rights policies and sensitive to equity issues.

3. All employees are expected to assess the quantity and quality of educational programs delivered to minority individuals by comparing benefits delivered to non-minority individuals.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary report was made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year data instead of fiscal year. As a result, this report is an overlap for part of the fiscal and calendar year 1995. Next year's 1996 calendar year report will be the first full report using the new reporting cycle.

Due to this situation and the need to formulate a new 4 year plan of work, a major effort was made in Civil Rights training. Each of North Carolina's 100 counties and the Cherokee Nation Reservation was required to do an individual Civil Rights Plan of Work for 1996-1999. To assist in this effort, new planning and reporting forms were designed and training videos were done for each county to take the faculty and staff through a step-by-step process of establishing baseline data and making projections for growth. Information was placed on the World Wide Web so that all employees could access if needed.

A standard component of the training procedures has also been to include information in new employee orientation meetings, monthly video briefings, and as topics for staff meetings. Because of the training effort, staff meetings were held solely to formulate the Plan of Work for 1996-1999 in all counties.

C. Implications

As a result of the training provided, all plans were formulated without problems or significant questions. Many people had been confused about the Civil Rights requirements before and the new training was successful in dispelling a myth that the planning and reporting were complicated. Feedback has indicated that many are giving civil rights issues a fresh look and are more excited about diversity programming.

Annual Report for Calendar Year 1995
CR02 - Public Notification

A. Goals

All people who can benefit from Extension educational programs are to have access and have the opportunity to be aware of their availability.

1. Every county will be accountable for a public notification plan.

2. Organizations requesting Extension assistance will be made aware of the position regarding non-discrimination.

3. A common non-discrimination statement will continue to be used on all printed material.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary report was made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year data instead of fiscal year. As a result, this report is an overlap for part of the fiscal and calendar year 1995. Next year's 1996 calendar year report will be the first full report using the new reporting cycle.

Each of North Carolina's 100 counties and the Cherokee Reservation formulated a Civil Rights plan of work for 1996-1999. Each incorporated the elements noted above. Specific efforts were planned to update correspondence with Extension-related organizations verifying their compliance with our non-discrimination standard. All printed materials continue to have the non-discrimination statement. A variety of media including Extension television programs broadcast the availability and access to our information.

C. Implications

Based on the reports and feedback from the plan of work formulation process, Extension employees are routinely incorporating extensive outreach efforts to reach the entire populations of their counties.

Annual Report for Calendar Year 1995
CR03 - On-site Civil Rights Compliance Review

A. Goals

Achieve parity of participation for all clientele served by county Extension offices.

1. All counties are expected to determine their baseline level of participation of various groups and set numerical goals for reaching under served/under represented groups.

2. All counties not in compliance are expected to show progress toward compliance within the 4-year period.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary report was made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year data instead of fiscal year. As a result, this report is an overlap for part of the fiscal and calendar year 1995. Next year's 1996 calendar year report will be the first full report using the new reporting cycle.

Civil Rights compliance is a topic built into every employee's annual performance review and each county has a scheduled biennial on-site review scheduled with their district director and certain specialists. Fifty-two (52) county reviews were held in calendar 1995 and documented on the newly implemented check-off list. Reviews done in 1996 will be the first to assess progress on the new plan of work.

C. Implications

The new check-off list has relieved a lot of anxiety regarding the reviews on the part of the county-based employees and the district directors indicate that compliance reviews are more positive than before. The individually formulated plans of work have provided for an increased understanding of the civil rights compliance process.

Annual Report for Calendar Year 1995
CR04 - Equal Employment Opportunity

A. Goals

1. Increase the number of minorities and females in agriculture and administrative positions.

2. Continue to ensure salaries are unaffected by race/sex.

3. Increase the cultural diversity of employees.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary report was made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year data instead of fiscal year. As a result, this report is an overlap for part of the fiscal and calendar year 1995. Next year's 1996 calendar year report will be the first full report using the new reporting cycle.

1. Enlist the help of current employees to locate and recruit minorities. Monthly administrative videos are distributed to all counties; recruiting segments are used to verbally encourage employees to recruit colleagues or alumni particularly qualified minorities.

2. Aggressively recruit at traditionally black and female institutions or at institutions that have a high percentage of minorities in the student body. In 1995, we recruited eight (8) times at such colleges/universities; these included NC A&T, NC Central, and Virginia State. Of the 171 applicants in 1995 who were male, 31 (18%) were black. Of the 286 female applicants, 53 (19%) were black.

3. Train within for progression to leadership positions. The Assistant Director of Extension for County Operations position was vacant in 1995 so some hiring decisions were on hold. However, of the filled 90 County Director positions at the end of calendar 1995, 21 (23%) were female and 13 (14%) were minorities; these figures represent an increase from 1994. The seven member district director team for 1995 was composed of three white females, two black males, and two white males.

4. Continue to monitor employment procedures to ensure equal opportunity for qualified candidates. Standardized procedures remain in place following University guidelines.

C. Implications

The table below outlines faculty and staff populations for county operations as of December 1995. Minority representation in professional positions is 20% for county operations. Future reports for this plan of work will show a comparison between previous and current year.

County Faculty and Staff

	WM	WF	BM	BF	OM	OF	Total	
EPA	242	311	25	109	0	9	696	EPA
SPA	0	209	0	3	0	1	213	SPA

							909	

Annual Report for Calendar Year 1995
CR05 - Program Delivery

A. Goals

1. Provide the same level of educational service to all people of the state without regard to race, sex, age, disability, color, national origin, or religion.

2. Advisory system members need to reflect all groups in the state regarding race, age, sex, disability, color, national origin, and religion.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary report was made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year data instead of fiscal year. As a result, this report is an overlap for part of the fiscal and calendar year 1995. Next year's 1996 calendar year report will be the first full report using the new reporting cycle.

All counties have developed a program delivery plan. Reporting is being planned for the World Wide Web to ease entry time and duplication of effort.

C. Implications

The table below indicates the Extension contact data for calendar year 1995.

Male	Female
942800	1034298

White	Black	AmerInd	Orien.	Hisp.
1470699	465603	26395	4127	10274

NORTH CAROLINA 1996 ANNUAL REPORT:
CIVIL RIGHTS

NARRATIVE SUMMARY OF ACCOMPLISHMENT

GOALS & PROCEDURES: EQUAL OPPORTUNITY EMPLOYMENT
Annual Report for Calendar Year 1995
CR04 - Equal Employment Opportunity

A. Goals

1. Increase the number of minorities and females in agriculture an administrative positions.

2. Continue to ensure salaries are unaffected by race/sex.

3. Increase the cultural diversity of employees.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary repor made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year d instead of fiscal year. As a result, this report is an overlap for of the fiscal and calendar year 1995. Next year's 1996 calendar yea report will be the first full report using the new reporting cycle.

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EPA	242	311	25	109	0	9	696	EPA
SPA	0	209	0	3	0	1	213	SPA

							909	

GOALS & PROCEDURES: PROGRAM DELIVERY
Annual Report for Calendar Year 1995
CR05 - Program Delivery

A. Goals

1. Provide the same level of educational service to all people of t state without regard to race, sex, age, disability, color, nati origin, or religion.

2. Advisory system members need to reflect all groups in the state regarding race, age, sex, disability, color, national origin, a religion.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary repor made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year d instead of fiscal year. As a result, this report is an overlap for t of the fiscal and calendar year 1995. Next year's 1996 calendar yea report will be the first full report using the new reporting cycle.

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White	Black	AmerInd	Orien.	Hisp.
1470699	465603	26395	4127	10274

GOALS & PROCEDURES: PUBLIC NOTIFICATION
Annual Report for Calendar Year 1995
CR02 - Public Notification

A. Goals

All people who can benefit from Extension educational programs are t access and have the opportunity to be aware of their availability.

1. Every county will be accountable for a public notification plan

2. Organizations requesting Extension assistance will be made awar the position regarding non-discrimination.

3. A common non-discrimination statement will continue to be used all printed material.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary repor made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year d instead of fiscal year. As a result, this report is an overlap for of the fiscal and calendar year 1995. Next year's 1996 calendar yea report will be the first full report using the new reporting cycle.

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C. Implications

Based on the reports and feedback from the plan of work formulation process, Extension employees are routinely incorporating extensive outreach efforts to reach the entire populations of their counties.

GOALS & PROCEDURES: CIVIL RIGHTS TRAINING
Annual Report for Calendar Year 1995
CR01 - Civil Rights Training

A. Goals

All employees of the North Carolina Cooperative Extension Service ar

expected to be aware of and comply with Civil Rights legislation. Tl includes the Americans with Disabilities Act.

All employees are to understand the human aspects of Civil Rights.

1. All employees are expected to be knowledgeable of the principle: laws of our nation regarding Civil Rights.

2. All employees are expected to be knowledgeable of Civil Rights policies and sensitive to equity issues.

3. All employees are expected to assess the quantity and quality o: educational programs delivered to minority individuals by compa: benefits delivered to non-minority individuals.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary repor made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year d instead of fiscal year. As a result, this report is an overlap for of the fiscal and calendar year 1995. Next year's 1996 calendar yea report will be the first full report using the new reporting cycle.

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C. Implications

As a result of the training provided, all plans were formulated with problems or significant questions. Many people had been confused ab the Civil Rights requirements before and the new training was succes in dispelling a myth that the planning and reporting were complicate Feedback has indicated that many are giving civil rights issues a fr look and are more excited about diversity programming.

GOALS & PROCEDURES: ON-SITE COMPLIANCE REVIEWS
Annual Report for Calendar Year 1995
CR03 - On-site Civil Rights Compliance Review

A. Goals

Achieve parity of participation for all clientele served by county Extension offices.

1. All counties are expected to determine their baseline level of participation of various groups and set numerical goals for rea under served/under represented groups.

2. All counties not in compliance are expected to show progress to compliance within the 4-year period.

B. Indicators of Success and Accomplishments

The 1992-1995 Plan of Work was completed in 1995 and a summary repor made to CSREES. In preparation for the 1996-1999 Plan, Extension Administration made the decision to base the plan on calendar year d instead of fiscal year. As a result, this report is an overlap for of the fiscal and calendar year 1995. Next year's 1996 calendar yea report will be the first full report using the new reporting cycle.

Civil Rights compliance is a topic built into every employee's annua performance review and each county has a scheduled biennial on-site scheduled with their district director and certain specialists. Fif (52) county reviews were held in calendar 1995 and documented on the implemented check-off list. Reviews done in 1996 will be the first assess progress on the new plan of work.

C. Implications

The new check-off list has relieved a lot of anxiety regarding the r on the part of the county-based employees and the district directors indicate that compliance reviews are more positive than before. The individually formulated plans of work have provided for an increased understanding of the civil rights compliance process.

REPORTING OPTION SELECTED
Total (100%) Data Collection

ADDITIONAL COMMENTS

CONTACTS
POPULATION AND CLIENTELE PROJECTIONS: 1862 PROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female
Potential Recipients	3073457 73.0%	2 24.0%	63165 2.0%	45312 1.0%	12123 0.0%	1833180 44.0%	23812 56.(
FY93 Participat.	1588864 79.0%	405377 20.0%	21229 1.0%	4585 0.0%	2968 0.0%	676713 34.0%	13463 66.(

FY94 Participat.	1662149 78.0%	439578 21.0%	23267 1.0%	4983 0.0%	3645 0.0%	709574 33.0%	14238 67.(
FY95 Participat.	1730213 77.0%	478560 21.0%	26496 1.0%	5708 1.0%	3999 0.0%	727902 32.0%	15170 68.(
FY96 Participat.	1572000 74.0%	507600 23.9%	28000 1.3%	12000 0.6%	4000 0.2%	1019328 48.0%	11042 52.(
FY97 Participat.	1603440 74.0%	517752 23.9%	28560 1.3%	12240 0.6%	4080 0.2%	1039715 48.0%	11263 52.(

POPULATION AND CLIENTELE PROJECTIONS: 1862 PARAPROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female
Potential Recipients	2299277 72.0%	795935 25.0%	52965 2.0%	35112 1.0%	19063 0.0%	1485360 46.0%	17169 54.(
FY93 Participat.	124898 50.0%	114601 46.0%	6163 3.0%	1466 1.0%	1098 0.0%	78522 32.0%	1697(68.(
FY94 Participat.	126698 50.0%	118588 47.0%	6438 3.0%	1948 0.0%	1489 0.0%	83082 33.0%	1720 67.(
FY95 Participat.	129016 49.0%	122443 46.0%	8832 3.0%	2443 1.0%	1824 1.0%	91208 35.0%	1733 65.(
FY96 Participat.	130929 49.0%	122913 46.0%	8016 3.0%	2672 1.0%	2672 1.0%	93521 35.0%	1736 65.(
FY97 Participat.	130929 49.0%	122913 46.0%	8016 3.0%	2672 1.0%	2672 1.0%	93521 35.0%	1736 65.(

POPULATION AND CLIENTELE PROJECTIONS: 1890 PROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female
Potential Recipients	433340 51.0%	385732 46.0%	25140 3.0%	0 0.0%	111 0.0%	355003 42.0%	4893 58.(
FY93 Participat.	17075 58.0%	10070 34.0%	2350 8.0%	0 0.0%	5 0.0%	6971 24.0%	224 76.(
FY94 Participat.	18125 57.0%	11175 35.0%	2670 8.0%	0 0.0%	6 0.0%	7850 25.0%	241 75.(
FY95 Participat.	20670 56.0%	13120 36.0%	3160 8.0%	0 0.0%	7 0.0%	9117 25.0%	278 75.(
FY96 Participat.	20642 55.9%	13150 35.5%	3200 8.6%	0 0.0%	8 0.0%	9200 24.9%	278(75.:

FY97	20772	13200	3220	0	8	9200	280(
Participat.	55.8%	35.5%	8.9%	0.0%	0.0%	24.7%	75.:

POPULATION AND CLIENTELE PROJECTIONS: 1890 PARAPROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female
Potential Recipients	433340 51.0%	385732 46.0%	25140 3.0%	0 0.0%	111 0.0%	355003 42.0%	4893: 58.(
FY93 Participat.	41275 56.0%	29750 41.0%	2100 3.0%	7 0.0%	10 0.0%	28250 39.0%	448! 61.(
FY94 Participat.	43630 55.0%	32850 41.0%	3250 4.0%	9 0.0%	12 0.0%	31750 40.0%	480(60.(
FY95 Participat.	45116 53.0%	34910 41.0%	4770 6.0%	10 0.0%	13 0.0%	33640 40.0%	511' 60.(
FY96 Participat.	46196 53.7%	34980 40.7%	4800 5.6%	10 0.0%	14 0.0%	34000 39.5%	520(60.!
FY97 Participat.	46326 53.7%	35000 40.7%	4850 5.6%	10 0.0%	14 0.0%	34000 39.5%	522(60.!

POPULATION AND CLIENTELE PROJECTIONS: TUSKEGEE PROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female
Potential Recipients	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY93 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY94 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY95 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY96 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY97 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(

POPULATION AND CLIENTELE PROJECTIONS: TUSKEGEE PARAPROFESSIONAL

	White not of Hispanic origin	Black not of Hispanic origin	American Indian/ Alaskan Native	Hispanic	Asian or Pacific Islander	Male	Female

Potential Recipients	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY93 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY94 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY95 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY96 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(
FY97 Participat.	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0.(