

**NORTH CAROLINA**  
**COOPERATIVE EXTENSION SERVICE**

**VISIONS  
FOR THE  
FUTURE**

**PROGRAM ACCOMPLISHMENT**  
**OVERVIEW**

**1995**



**North Carolina  
Cooperative Extension Service**

NORTH CAROLINA STATE UNIVERSITY  
NORTH CAROLINA A&T STATE UNIVERSITY

**NORTH CAROLINA COOPERATIVE EXTENSION SERVICE**

***ANNUAL REPORT OVERVIEW***

**1995**

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# NORTH CAROLINA COOPERATIVE EXTENSION SERVICE

## *ANNUAL REPORT 1995*

### **Program Overview**

The North Carolina Cooperative Extension Service, with its strategic plan, "Our Commitment to Excellence", and its four-year plan of work, "Visions for the Future", provide 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 four years of Extension educational programs from 1992 to 1995. The accomplishments indicated in this report reflect 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 wide variety of organizations, groups, and individuals.

Extension's educational programs were planned in collaboration with over twenty thousand of the state's citizens. These programs were effectively implemented, reaching all areas of the state, and a vast number 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 the scope and quality of Extension's programs for the benefits of the state's citizens.

## **HIGHLIGHTS OF NATIONAL INITIATIVES**

### **FOOD SAFETY AND QUALITY**

Twenty-nine thousand six hundred thirty-two participants in programs adopted safe food handling practices such as temperature control and sanitation that minimize risk; over 19,000 agricultural participants adopted practices that protect the food supply, including appropriate use of drugs and chemicals in agriculture and safe food processing. Nineteen thousand three hundred forty-seven people increased their knowledge of food safety public policy issues such as irradiation, e. coli contamination and salmonella. Almost 26,000 participants increased their knowledge of the risks and benefits of specific food components, such as salt, fat and cholesterol, processing technologies or food protection chemicals. Eight thousand nine hundred seventy-three new private pesticide applicators were certified, and 25,560 applicators were recertified.

North Carolina's Food Safety and Quality Initiative was chosen by 28 counties (28%) as a major programming effort. Over 135,000 people were reached with food safety information. Specific programming was conducted for targeted groups such as food service employees, day care providers, livestock and dairy 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, and the commercial seafood industry.

The Extension Crisis Management Plan was in place to respond to food safety concerns such as corn mold infestation and national incidence like E. coli O157:H7 outbreaks.

Extension was a major provider of food safety training for food service providers. In a sample of 21 counties over 3300 food service employees received food safety training or over 150 employees per county.

### **SUSTAINABLE AGRICULTURE**

One hundred twenty-two agents received training in sustainable agriculture systems. Over 40 counties implemented programs addressing sustainable farming systems. Statewide, over 38,000 people participated in 751 sustainable agriculture meetings, workshops and tours, and 524 on-farm demonstrations were conducted. These activities, including program planning, delivery and evaluation involved a diverse mix of people with interest in sustainable agriculture issues, such as farmers, non-governmental organization representatives, and others. Members of the

Sustainable Ag Task Force of the College of Agriculture and Life Sciences were in lead roles in projects funded by Z. Smith Reynolds Foundation, SARE/ACE, SARE Training Consortium and the W. K. Kellogg Foundation.

During the program period, Extension played a lead role in the establishment of an environmental farming systems demonstration farm where sustainable agriculture systems will be examined and demonstrated, based on selection by producers, NGO's, land-grant personnel and the North Carolina Department of Agriculture.

As a consequence of collaborative efforts of research and extension faculty, farmers, other agencies and NGO partners, county reports indicate the following implementation of sustainable practices and approaches.

Practice/approach	No. farmers	No. acres	No. animals
New income sources	1,055	24,140	564,644
Conservation tillage	2,775	144,602	53,090
IPM or IRM practices	1,774	115,608	4,172
Organic production	346	9,120	320
Animal manure use	1,269	55,915	175,125
Biocontrol	914	15,096	905
Cultural pest control	1,598	127,227	1,325
Farm wildlife management	217	60,003	0

## **WATER QUALITY AND WASTE MANAGEMENT**

Over 52,800 individuals attended 1302 meetings to discuss water quality policy. In addition 17,425 individuals inquired about and received information on drinking water quality. Seven thousand farmers started applying nitrogen at rates based on realistic yield expectations on approximately 7,400 acres as recommended by Extension. Eight hundred farmers installed new drainage control structures to reduce nitrate concentration on 86,323 acres. Eighteen thousand seven hundred and six farmers and forest landowners implemented BMPs to reduce soil erosion and surface water contamination from sediments and associated nutrients and pesticides with 990,315 acres impacted. One thousand six hundred and seventy-one farmers calibrated spreaders and irrigation systems to apply manure at optimum rates and application patterns on 268,230 acres.

Fourteen thousand and eighty-two clientele initiating backyard composting with Extension assistance. More environmentally responsible purchasing decisions were reported by 38,045 clients. Over 500 communities were assisted in successfully implementing new solid waste management options and 613 implemented new recycling programs. Over 300,000 individual clients and families reporting increased participation in recycling programs.

Thirty thousand volunteers assisted in water and waste management programs. In addition approximately three million dollars of non-extension resources were acquired to assist these efforts.

## **PLIGHT OF THE YOUNG CHILD**

385 community groups designed or implemented plans to reach limited-resource families with young children. The Extension Service continues to work to improve the lives of its youngest citizens. Agents in many counties are leaders in securing and implementing Smart Start programs. Agents also work with Headstart and WIC clients in the areas of parent education and nutrition.

## **YOUTH AT RISK INITIATIVE**

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. A primary reason for the success of Extension's efforts in youth-at-risk programming was the effective use of coalitions. During the past four years, more than 373 coalitions worked to address youth-at-risk issues. Coalition members were active as teachers, mentors and role models for at-risk youths. Coalitions have helped to maximize scarce resources and bring together the expertise needed for effective and efficient youth-at-risk programming. Over \$1,289,378 of federal, \$2,259,856 of state, \$141,817 of local government, and \$245,761 of private dollars were used to support youth-at-risk.

The Cooperative Extension Service youth-at-risk programs have a positive impact on youths. Nearly 27,049 youths have improved their academic performance as a result of Extension programs. Improved study habits and grades, increased school attendance, and reduction of out-of-school and in-school suspension were reported.

Approximately 5,610 young people have decreased their alcohol and other drug usage after participating in Extension programs.

Preparing for the future is the focus of the work force preparedness programs sponsored by 4-H for young people 13 to 19 years old. Over 25,338 young people participating in work force preparedness programs learned resume writing and interview skills, obtained an in-depth look at a variety of career options, gained goal setting and decision making skills and learned about the world of work.

## **DECISIONS FOR HEALTH (Health and Human Safety)**

Thirty-one County Extension Centers and seven special project counties, or a total of 38% of North Carolina Extension Service Centers reported activities under Health and Human Safety in 1995. This represents an increase of 53% over the prior

three years when 18 counties participated in these activities. Additionally, much of the health and safety effort within the North Carolina Cooperative Extension Service is reported under core programs such as Foods, Nutrition and Health or the Farm Safety Program.

365,442 adults and youth have participated in programs aimed at increasing knowledge about or changing attitudes or behavior affecting health status or preventing disease and injuries.

105,843 community leaders and community members have participated in workshops, seminars or other educational opportunities on health and health related issues.

Over 24,094 farmers and farm workers or their families have participated in programs on the proper use and handling of pesticides and the correct use of pesticide contaminated clothing.

Three hundred and forty nine communities have organized and maintained on-going health promotion and disease and injury prevention programs.

Early childhood immunization continues to be a focus of the Rural Health Program. Agents continue to be players in county immunization efforts and in several instances have assumed leadership of county immunization education programs.

The National Cancer Institute-funded Southern Appalachia Leadership Initiative on Cancer (SALIC) project has been operating for the past three years. Four cancer control coalitions were operative in North Carolina. Approximately 40 community action groups were formed under the auspices of the coalitions and have become involved in breast and cervical cancer prevention and control activities.

The North Carolina AgrAbility Partnership has been functioning for the past two years. The AgrAbility project staff worked with Extension personnel in three counties to reach out to disabled farmers, farm families and farm workers with information and assistance in meeting special needs. Initial steps were taken to expand AgrAbility to fifteen counties in Eastern North Carolina.

## **COMMUNITIES IN ECONOMIC TRANSITION (RURAL REVITALIZATION)**

Strategic plans/economic analyses which identified opportunities for diversification, deterrents to development and/or infrastructure improvements, started or revised were developed in 866 communities. Improved leadership and problem solving skills were demonstrated by 45,429 citizens/emerging leaders .

Increased economic knowledge was demonstrated 21202 young adults and



emerging leaders. Over 14,500 new current and potential entrepreneurs were assisted to analyze their enterprise. Of these, over 2308 made informed decisions about a business start-up as a result of extension assistance. Estimates of investment in new business start-ups amounted to over \$116,000,000. Seven hundred thousand citizens were impacted by Extensions involvement and assistance to 1,023 communities with almost 1,500 communities that planned or initiated beautification projects. Over 1,023 communities assisted with waste, water supply or waste-water management problems. Over 91,000 volunteers provided 101,100 hours of service in these efforts. In addition, more than \$1,688,370 in non-extension dollars were raised to support these programs.

## **HIGHLIGHTS OF 3 (d) AND SPECIAL FEDERAL FUNDED PROGRAMS**

### **INTEGRATED PEST MANAGEMENT**

Seventy-nine counties reported IPM activities involving alfalfa, apples, Christmas trees, corn, cotton, Irish potatoes, greenhouse crops, pastures, peanuts, small grains, soybeans, tobacco, turf, vegetables, cattle, swine, and poultry. County accomplishment reports indicate that 24,327 growers farming 2.7 million acres are now using three or more of the following IPM methods: 1) pesticide applications based on scouting and thresholds; 2) pesticide applications based on predictive models; 3) crop rotations to hinder or destroy establishment and survival of pests; 4) pest resistant plant varieties; 5) early maturing varieties to avoid pest problems. This impact represents 68% of the row crop acres in North Carolina.

An animal IPM project with 25 poultry and five swine fieldmen, impacting 12 million head of pigs and poultry, was initiated. Another 200 industry fieldmen were trained in IPM strategies, affecting the pest management decisions of 20 integrators and over 1,000 growers raising 180 million animals.

The Christmas tree IPM program identified environmentally sound pest management methods and helped reduce community conflict over tree production.

Several key IPM programs reported significant reductions in pesticide use and cost savings, including:

- \* swine operations monitored roach populations and targeted treatments, reducing pesticide applications from one to two per month to one treatment every three months .

- \* in 1995, cotton growers used .8 fewer bollworm control applications, due to lower pest pressure, eliminating 16,000 lb a statewide and saving \$4 million.
- \* cotton aphids were controlled biologically, saving \$550,000 in pesticide costs.
- \* 80% of peanut growers use a leafspot advisory system developed by Extension, and they have reduced fungicide use by 250,000 lb and saved \$2.5 million.
- \* 50% of the apple growers in the largest producing county used pheromone traps to monitor codling moth and eliminated two insecticide treatments on 6,000 acres, saving \$180,000.
- \* computer-based environmental monitoring systems installed on two golf courses were used to predict insect pest pressure. One course saved \$250,000 by revising pest management strategies. All golf courses in the coastal region have adopted at least part of the current IPM program.

## **PESTICIDE APPLICATOR TRAINING**

North Carolina has 29,570 private pesticide applicators. During the program period, 8,973 new applicators were certified to use restricted use pesticides, and 25,560 applicators were recertified. Fifty-six two-day schools were held to train 5,890 new commercial pesticide applicators, public operators, consultants and dealers. Recertification classes were taught to over 9,000 members of these groups. To support these training efforts, two new commercial applicators manuals were written, the N. C. Pesticide Laws Manual was revised, Worker Protection Standard material was incorporated into the curriculum, and other manuals and educational materials were updated. Two-hour Worker Protection Standard training meetings were attended by 9,220 employers in 100 counties.

## **PESTICIDE IMPACT ASSESSMENT**

Mail surveys of 6,367 growers were conducted to determine pesticide use patterns on sweet potatoes, cotton, tomatoes, poultry, Irish potatoes, and Christmas trees. Data were collected on herbicides, insecticides, miticides, nematicides, fungicides, growth regulators and non-chemical pest management practices. These data were added to data bases collected in 1988, 1989 and 1990, and the combined data bases were used to respond to inquiries for pesticide use data from USDA and other organizations. Information was provided to extension and research personnel in North Carolina on current pesticides registered with US EPA and N. C. Department of Agriculture using the National Pesticide Information Retrieval System. Information was also provided to farmers, agribusinesses and other professionals working with chemical and non-chemical pest management strategies.

## **NORTH CAROLINA RENEWABLE RESOURCE EXTENSION ACT**

Increased earnings of approximately \$16,915,510 resulted through better applications of timber products marketing techniques and increased hunting and fishing leases as a direct result of extension programs. Increased savings and earnings of approximately \$2,680,000 resulted through renewable resources being more efficiently utilized.

Public policy educational programs enhanced approximately 1,931,563 acres of timberland. Approximately 15,875 contact hours of continuing education for renewable resource professionals were provided. Approximately 232,975 people increased their understanding of environmentally appropriate practices after using extension materials or after participating in extension programs.

## **CONSERVATION AND FORESTRY TITLES OF THE 1990 FARM BILL**

Twenty-seven thousand people gained knowledgeable about the Conservation Title of the 1990 Farm Bill. Waterways, strip cropping, transplanting, field borders, subsurface irrigation with water structures, conservation tillage, sequential and continuous no-till, diversions, terraces, sediment ponds, cross-slope farming, fencing, critical area treatment, spring development, filter strips, ponds were some of the 9777 practices installed.

Seven thousand six hundred and seventy-five people gained knowledge about the Forestry Title of the 1990 Farm Bill. Timber management, thinning; stream-side filter strips; recreational trails; wildlife plantings; tree planting (longleaf and Atlantic white cedar); prescribed burning were some of the 1817 practices installed.

North Carolina was a pilot state for the wetlands reserve program. In the initial sign-up 4,800 acres were included. In subsequent sign-ups, 2,176 were described as eligible or intended to participate.

In Urban Forestry, workshops and meetings were held to train master gardeners, arborists and other professionals. Over 500 people were reached. Assistance was provided to 25 communities or organizations about hazard trees, tree ordinances, planning and renovation. During 1995 educational materials were developed for use by agents and others in the identification and management of urban trees and plants of the maritime and coastal forests. These will be of great use for landowners, particularly homeowners and communities desiring to manage for the urban forest.

Forty-three volunteers contributed 74 days of service to assist the efforts of

these programs. Approximately \$380 of non-extension resources were raised to assist these efforts.

## **ENVIRONMENTAL EDUCATION**

Almost 400,000 individuals and families increased their awareness of public policy issues related to environmental action and 442,000 increased their participation in public policy. Practices designed to increase environmental quality were adopted by 1,323,355 people with over 52,700 best management practices adopted. Major issues addressed include drinking water quality, nonpoint source pollution, residential and municipal solid waste management, animal waste management, outdoor air quality, radon and indoor air quality, and natural resource management. Targeted programs included limited resource citizens, the Cherokee Indian Reservation, schools and many local communities and municipalities. Emphasis has been placed on public issues education and conflict resolution through agent training and the use of interdisciplinary teams to address specific conflicts. Networking has occurred with state and federal agencies, schools, non-governmental organizations and the private sector. Two hundred and thirty-five volunteers have played a key role in the delivery of programs, particularly to youth audiences. In addition \$13,500 of non-extension resources were raised to assist these efforts.

## **FARM SAFETY**

Over 60 counties devoted one or more programs to farm safety and health topics, including victim extrication from farm machinery, use of respirators in confinement livestock barns, handling of breeding boars, and noise in swine facilities. These programs were presented to farmers, Health Department officials, landscape operators, emergency rescue personnel and youth. Fifty- one thousand participants received information during educational activities; there were almost 8,000 requests for farm safety materials; and 22,732 farmers and other persons adopted one or more safe farming practices. Over 6,000 people improved their knowledge of farm accident rescue procedures. Over 235 farmers, landscapers and greenhouse operators were trained in Worker Protection Standards.

Halifax County initiated an Agricultural Safety Advisory Program, involving over 60 limited resource farmers and ag workers in a peer advisor program focused on agricultural injury prevention. One hundred twenty-one injury prevention actions were taken by participants, and 63% reported making safety improvements to their property or equipment.

Special efforts provided educational materials for Spanish speaking workers. A Spanish and English booklet on pesticide use was produced and distributed, and a video on healthy housing was produced.

## LIMITED RESOURCE/LOW INCOME INDIVIDUALS AND FAMILIES

The Cooperative Extension Program at NC A & T State University, through its staff development efforts, have trained 199 field staff and 775 volunteers to reach, teach and have a positive influence on the behavior of 23,451 limited resource individuals and families.

Training objectives focused on programming strategies to reach and teach this audience; using appropriate strategies and subject matter to address needs and measuring program impact. As a result of these efforts to better prepare the staff to work effectively with this clientele, the number of requests for information and programs for this audience has increased tremendously. A Profile of Families in NC Public Housing Communities was distributed to one hundred one (101) extension units, ninety-nine (99) housing authority offices and other 1890 Land Grant Universities. This document provided a descriptive profile of the addressing needs and developing curricula.

Four hundred thirty-two (432) new limited resource adults and teen volunteers were recruited and participated in at least four training workshops to enhance skills to design learning experiences for community youth. Volunteers indicated improved programming skills, organizational skills and increased subject matter knowledge. An average of twelve hours of volunteer service was rendered by these volunteers. Community Voices, a participatory shared leadership development program for rural individuals and families, reached over 800 community leaders who completed fourteen learning modules enabling them to experience a feeling of self achievement, improve their decision making skills within their families and communities. Participants have indicated increased involvement in community affairs that affect the quality of life in their community and county.

Problems associated with poverty are complex and often difficult for any one organization to address. County and state staff were encouraged to develop linkages with other agencies and organizations, foster a congenial helping relationship, and create a non-threatening atmosphere. Forty (40) coalitions have been established. The average agency or organization involvement in any one coalition included three others in collaborative efforts with the Cooperative Extension Program. Four thousand-thirty four (4,034) limited resource clientele were referred to other agencies and organizations for assistance.

A grant from the Governor's Crime Commission has made possible an innovative program designed to assist victims of crime in public housing communities. A collaborative effort with the Durham Housing Authority, Durham Police Department, NCCU Law School and Ministers provided residents in eleven (11) public housing communities in Durham County, NC with information and services to assist victims of crime in understanding the dynamics of victimization and explored strategies for

stabilizing their lives. According to Housing Authority personnel, counseling and support groups have helped the residents and victims restore their sense of dignity, self-esteem and coping mechanisms. The coalition has become vital in obtaining outside funding.

Limited resource individuals and families in North Carolina are improving their quality of life. Eighty (80) percent of the twenty three thousand four hundred fifty-one (23,451) limited resource persons participating in educational programs indicated having improved or adopted new practices. Basic life skills continued to be the focus of many programs for limited resource clientele. Highlights of selected programs include: Twenty (20) handicapped adults increased their knowledge relative to budgeting, comparative shopping and decision-making. Pre- and post-test scores showed a 65% increase in the subject matter being taught. Male and female inmates have participated in programs to assist them with budgeting, parenting, building self esteem and managing conflict.

One hundred forty-two (142) limited resource family members participated in time and money management workshops; seven (7) of these participants set and followed through on goals to purchase a house and car. Sixty-five (65) families reported record-keeping systems and increases in knowledge and skills in the management of finances. In cooperation with a local family violence program, a workshop on spouse abuse was held. Twenty-five (25) people attended and were able to learn more about spouse abuse, how it affects families. Fifty (50) small/part-time farmers participated in a comprehensive educational program on alternative agricultural enterprises. Participants as a result of this effort developed and implemented a plan of action leading to the establishment of 48 on-farm demonstrations on various alternatives. A special teen leadership program attracted over 40 teens who are currently community leaders and are positive role models for younger youth.

## **EXPANDED FOOD AND NUTRITION EDUCATION PROGRAM**

The EFNEP program has reached more than 24,000 adults and 26,000 youth during the four years ending in FY:95.

While most of them were reached through traditional EFNEP program efforts with individuals and small groups, increased opportunities arose to teach preformed groups referred by cooperating agencies. Percent of adult participants being worked with in groups rose from 56% in FY:92 to 72% in FY:95. Some of the less traditional adult groups reached were in community shelters and correctional centers. Youth were taught in Alternative school programs, After-school Programs, Youth Foster Homes, Boys and Girls Clubs as well as in community groups.

Grant funding for cooperative projects has allowed EFNEP to grow in several

new directions. Through the ES/WIC initiative, Wake Co. Dept. of Health and Smart Start funds, nine counties have participated in breast feeding support projects. In four years, over 4300 WIC clients in both urban and rural settings had received in-home breast feeding support through EFNEP. Results showed increased numbers of mothers choosing to breast feed, and a significant increase in breast feeding duration.

ES/WIC grant funds also supported a special program for pregnant teenagers allowing for development of a curriculum ("Hey, What's Cookin'") which emphasizes experiential learning and skills development. After field testing and evaluation of the curriculum, it was introduced in training to all EFNEP staff early in FY:95. Since then, over 1000 were enrolled, bringing the four-year total to more than 3000 pregnant teenagers being worked with in EFNEP.

## **MULTICULTURAL DIVERSITY**

The North Carolina Cooperative Extension Service as at total organization is committed to and is currently working toward achieving and sustaining multicultural diversity within its programs, operations, personnel and audiences.

Designing programs for special needs populations has been a successful experience. County staffs continued innovative programming for this audience.

County programming has illustrated that special needs youth can benefit from traditional 4-H activities. Programs and learning experiences provided positive reactions among special needs youth and their families as they realized school, communities, and 4-H are interested in their well being.

In addition, 101 county directors and 22 department extension leaders participated in leadership institutes. They took the Human Patterns Assessment which determined work styles and characteristics in working with people. This tool has helped county directors, specialists and administration better understand the overall attitudes and patterns of each other's work style. As a group they have a greater sensitivity to individual differences and Extension Administration is demonstrating greater appreciation of the differences and similarities of the group.

As Extension has expanded its partnership with other agencies and organizations, the diversity of our audiences has increased our outreach to form unique collaborations. In the Youth-at-Risk program, approximately 200 long-term coalitions worked to address long-term goals. More than 12,515 volunteers donated over 33,977 days to the initiative. Over \$1,289,378 federal; \$2,259,856 state; \$141,817 local government, and \$245,761 private dollars were used to support youth-at-risk programming.

As the organization places greater emphasis on diversity programming and

recognition of outstanding efforts, additional success stories will surface. One of the strengths of programming in North Carolina is a positive environment supporting programming for diverse audiences.

## **PARENTING AND FAMILY - YOUTH**

Problems facing families in North Carolina are interconnected and complex, and require innovative, multi-disciplinary solutions.

Staffs at North Carolina State University and N. C. A & T State University focused their efforts on providing information to help families develop their capacity to enhance the growth and development of children and to strengthen families. Target programming included: child care, parent education, family strengths, aging, and family legal issues.

76,540 parents and 37,193 youth acquired the knowledge and skills associated with effecting parenting.

Over 22,000 child care workers adopted recommended practices for classroom management, scheduling and curriculum development in order to increase their overall professional competency.

Increased networking efforts by Family and Consumer Educators proved beneficial in terms of funding, as well as the planning and implementation of programs.

Literally thousands of individuals and families benefit each year from the educational, collaborating, and referral work done by Extension professionals. New technologies are making possible more rapid access to researched-based information, and the delivering of that material to clientele. Mass media strategies enable thousands more to access needed information disseminated by Extension.

## **VOLUNTEER DEVELOPMENT AND MANAGEMENT**

Volunteers working toward successfully improving the quality of family life are essential to the local community and the Cooperative Extension Service. This program offers volunteers an opportunity to improve their leadership skills and their ability to analyze issues and understand political processes in order to achieve desired goals.

### **North Carolina Family Literacy Program**

Literacy programs have been conducted in all 100 counties in North Carolina. Extension Homemakers' volunteer hours in local, state and global awareness and literacy have totaled over 2 million hours.



## Family Community Leadership

The North Carolina Family Community Leadership program strongly emphasizes leadership development and challenges communities to effectively participate in resolving public issues. The program focuses on public policy education and targets women and families. All 100 counties have conducted an FCL training session with more than 7,480 persons graduating. Eighty-four donors have contributed more than \$186,365 to the North Carolina Family Community Leadership Programs.

# HIGHLIGHTS OF STATE MAJOR PROGRAMS

## ALTERNATIVE INCOME OPPORTUNITIES

Fifteen thousand five hundred seventy-seven individuals enhanced their knowledge of income diversification, how to produce and market new products and ways to integrate new income generating enterprises into existing operations. New opportunities include meat goats, dairy beef, intensive fruit and vegetable production on small acreages, ornamentals and rabbits. The total program provided 253 meetings and 226 demonstrations to 8,744 people interested in alternative income opportunities.

Statewide, 946 individuals generated income from the production and marketing of alternative enterprises. Estimated gross income from these new enterprises is \$2.9 million or \$3,107 per person. Net income varied from a few hundred dollars to several thousand dollars, depending on the enterprise and cost of production. For example, in one county, seven farmers began growing plastic-culture strawberries. By improving their management, production and marketing skills, they netted about \$16,000 per acre in 1995.

## FARM BUSINESS MANAGEMENT

Twelve thousand eight hundred and fifty employers of agricultural labor improved their understanding of labor rules and regulations. As a result of labor law and regulations workshops in one county, 61 farmers gained working knowledge of the H2-A program; they hired 246 workers with a labor value of almost \$1.2 million.

Over 15,500 farmers and tax preparers improved their understanding of income tax laws and tax management; 23,427 farmers improved their management decision-making skills; and 14,437 farmers and agribusiness and agency personnel improved their knowledge of domestic food and agricultural trade and environmental policies. Over the four years, 471 farmers adopted FBMS (farm business management system) and 2,318 farmers adopted other formalized record-keeping systems. Seven hundred eighty-two farm lenders improved their understanding of FBMS and integrated farm financial analysis. Almost 12,600 crop farmers were made aware of the requirements and provisions of the Crop Insurance Reform Act and of the implications of failing to make timely decisions. Over 100 people reported tax savings of \$300,000 due to information gained at a series of workshops on estate planning. As a result of financial analysis education in one county, three farmers reported making accurate investment decisions with an estimated value of \$2 million.

## **LIVESTOCK PRODUCTION, PROCESSING AND MARKETING**

This program provided educational and technical assistance to beef, dairy, swine, horse and small ruminant producers and related agribusinesses. County program reports indicated the following impacts: one thousand five hundred sixty-two livestock producers initiated management intensive grazing systems; another 3,500 started or expanded grazing on forages fertilized with animal manures, with an estimated economic impact of over \$1.9 million. Housing ventilation systems were improved by 483 producers. Three thousand five hundred twenty-eight growers improved their marketing strategies; in the case of beef cattle the estimated economic impact on over 2,200 farms was at least \$900,000. Feed analyses were implemented on 2,407 operations, and 2,277 farmers formulated animal production diets with assistance from Extension programs. Nine hundred twenty-one growers implemented IPM or IRM programs, with an estimated impact of over \$1.5 million. In addition, 2,382 producers initiated quality assurance programs to maintain and improve animal product quality and safety. Over 1,300 new small farm livestock enterprises were started.

Producers and the consuming public both play key roles in understanding the benefits and impacts of livestock production on farms, in communities and in society. To this end, 24,000 producers increased their knowledge and ability to communicate about animal welfare; 18,000 became knowledgeable about environmental issues; and over 14,000 producers enhanced their knowledge of food safety issues. Likewise, consumers gained knowledge of animal welfare issues (215,000), environmental issues (296,000), and food safety (212,000). In many cases collaborative efforts among many individuals and organizations would be expected to provide these types of information to many more than those just contacted directly through extension activities.

## **POULTRY PRODUCTION, PROCESSING AND MARKETING**

Fifteen hundred sixty-nine contract poultry growers gained knowledge on keeping enterprise records for use in decision making. New technology was adopted by the following number of growers: efficient lighting techniques (563 growers in 885 houses); efficient ventilation (758 growers in 1,274 houses), and labor savings (602 growers in 608 houses). Efficient lighting technologies decreased production costs by \$535 per house for a total savings of \$473,475 over the four-year period. Ectoparasite and pest monitoring as a part of pest control strategies was practiced by 1,299 growers and industry personnel. Mortality composting or other recycling technology was used by 1,152 growers, affecting 3,253 houses. Four hatcheries implemented a hatchery offal composting recovery program, saving \$100,000 annually in landfill charges. Best management practices for litter management and use were implemented by 1,410 growers, impacting 2,256 poultry houses. Additional efforts assisted growers with decisions on new house construction; and hatchery managers also received assistance from Extension.

## **AQUACULTURE AND COMMERCIAL FISHERIES PRODUCTION, PROCESSING AND MARKETING**

Aquaculture production, processing and marketing has continued to gain strength compared to the early nineties. There currently are 399 growers of food fish with a total production value of about \$26 million annually. Educational efforts were devoted to helping potential growers explore opportunities in aquaculture and to training lending agencies in these opportunities. Several new catfish and hybrid striped bass operations were established during the four years with Extension assistance. Five new hybrid striped bass operations began in 1994; the total production is 290 acres. While production of hybrid striped bass has increased, the program has also responded to challenges facing the industry, such as insufficient fingerlings and a parasitic grub. The state now has two fingerling producers, and Extension personnel helped develop a mechanism to provide veterinarian expertise to examine fingerlings for the yellow grub. Educational programs to help crawfish producers improve production practices enabled growers to average over 700 pounds per acre.

Both warm water and cold water recirculating fish production systems continued to be developed and refined. Plans were developed to assist farmers in establishing production scale recirculating fish production systems.

Efforts in cold water aquaculture focused on enhancing profitability to growers. Through cooperative efforts with North Carolina Department of Agriculture and the N. C. Trout Growers Association, two growers began contract trout production and eight detailed production plans have been developed for trout farms. Five waste

management systems are now in various stages of completion and operation, utilizing hydroponics, composting and sand-filtration technology. All are serving as demonstration farm sites. Three active farm record keeping demonstrations were initiated with growers.

Educational efforts were devoted to influencing the development and implementation of HACCP procedures and regulations for the seafood industry. As a result of these activities and other educational approaches, one catfish processor was the third plant in the US to qualify to participate in the National Marine Fisheries Service HACCP inspection program.

## **FIELD CROP PRODUCTION, PROCESSING AND MARKETING**

Continued adoption of recommended nutrient management practices and systems resulted in a decrease of over 10 million pounds of phosphorus applied to corn, tobacco and soybean acreage than was applied in 1990-91. The 153,168 soil samples taken in 1995 alone represented a 29% increase in the number of annual soil samples analyzed compared to the base years. This information is critical to efficient and environmentally sound fertilization programs. In Greene County, field crop producers reduced nutrient costs by over \$345,000 by using manure and soil testing to minimize costs and environmental impacts.

Broad acceptance of soil management practices has occurred. Nearly 70% of farms are utilizing at least two best management practices (BMP's) for soil management, impacting over 2.45 million acres of farm land. No-till planting of corn, burley tobacco and soybeans has increased significantly. Statewide soybean acreage planted no-till increased to 38% in 1994 from 26% in 1991. This and other soil management practices have resulted in 1.9 million tons less soil erosion on soybean acreage alone.

A statewide survey of agents indicates that 49% of growers have adopted a system of three or more integrated pest/crop management practices impacting over 2.35 million acres. A peanut leafspot advisory system is widely used; in two major peanut producing counties, this program reduced fungicide applications and saved farmers about \$2.5 million.

Other efforts focused on improved marketing of field crops and the need to increase the competitiveness and quality of tobacco; the switch to greenhouse production of tobacco seedlings resulted in labor cost savings of \$4.3 million statewide.

## **HORTICULTURAL CROPS PRODUCTION, PROCESSING AND MARKETING**

In the tree fruit area, approximately 400 acres of apples were planted using the high density orchard system being introduced by Extension. The system produces high quality fruit earlier in the life of the orchard, is safer and easier for labor and has greater efficiency in pesticide application. Another emphasis was an integrated orchard management system with a goal to reduce pesticide use by 50%. Growers are educated to apply pesticides on an as-needed basis rather than a rigid schedule. Accurate timing of early season fungicide applications reduced total chemical use by 50%. By using weather-based disease prediction models, insect monitoring, foliar and tissue analysis for fertility requirements, BMP's, and disease resistant cultivars, several growers have reduced pesticide use by 33%. Alternative crops being produced are pecans, persimmons, chestnuts and nectarines.

For small fruits, the acreage of strawberries on plastic has grown from 200 acres in 1991 to 1,000 acres in 1995, with an estimated farmgate value of \$10 million.

Potato growers successfully managed Colorado potato beetle through land and insecticide rotations, sound record keeping and IPM efforts fostered by Extension. Pesticide surveys indicated adoption of IPM practices by over 90% of potato growers.

Post harvest handling efforts indicated that improving sweet potato curing and storage facilities reduced losses by one third, and a new high pressure sprayer design resulted in a 50% reduction in sweet potato packing line water use.

Crop diversification continued. Onion acreage has increased from nearly zero to 300 acres over the last five years; several growers raised luffa gourds and demonstrations were conducted with specialty melons, herbs, lettuce and elephant garlic.

## **URBAN HORTICULTURE, FORESTRY AND PEST MANAGEMENT**

The demand for urban horticulture information has grown significantly during the four years, not only for plant material selection and cultural practices, but also in water quality, waste management and pesticide management. Three thousand five hundred fifty-one people participated in the Master Gardener training program; their volunteer time commitment is valued at \$1.2 million. Environmentally sound horticultural practices were adopted by 15,000 urban horticultural professionals and an estimated 308,000 homeowners. Thirty-seven new professional landscape contractors were registered.

IPM strategies have been accepted and implemented in commercial turfgrass operations, including monitoring weather conditions and predicting pest outbreaks,

using new application technology, and alternative pest control approaches.

One hundred fifty local governments and communities were assisted with urban forestry management plans or practices. Public fears over aerial spraying of 133,000 acres to eliminate Asian Gypsy Moth were minimized through a public education and information dissemination program led by Extension in cooperation with the N. C. Forestry Service, N. C. Department of Agriculture and federal agencies.

## **NORTH CAROLINA FOREST RESOURCES, WILDLIFE PRODUCTION, PROCESSING AND MARKETING**

Improved forest management and better application of marketing techniques by 5,780 landowners, on almost 1 million acres, resulted in increased earnings of \$14,339,270. New forest management plans were implemented by 1,730 landowners with 219,240 acres impacted. Landowners increased their income by \$606,160 by altering their land use on 62,465 acres for wildlife activities. Over 1,600 Christmas trees growers started soil and plant tissue testing. Adoption of improved practices helped deliver top quality trees. Over 3,400,1000 trees of the approximately 7 million sold had a USDA grade #1 or better.

Sixty wood products firms adopted new manufacturing techniques such as quality control, thin kerf machines or computerized networks and saved \$2,158,500 with Extension assistance. In addition, 135 jobs were created with 135 new or expanded wood products manufacturing facilities.

Over 5,000 volunteers provided 5,145 days of service to assist in these program efforts. In addition, \$756,465 were raised from non-extension sources.

## **ENVIRONMENT AND CONSERVATION OF NORTH CAROLINA'S NATURAL RESOURCES**

Almost 1,000 elected and appointed officials increased their knowledge of forest management, wetlands, endangered species, or air quality issues. Two hundred fifty-nine new wildlife management plans were developed for 141,058 acres. Approximately 170 landowners leased land for recreational purposes with value of these new leases being assessed at \$89,716. Longleaf pine was established on 2,140 acres with an additional establishment of 115 acres in white cedar. Almost 1,000 pond owners improved fish production and water quality.

The Forest Stewardship Program has been a major educational effort in North Carolina. Extension has had primary responsibility for the development of educational materials and the training of professionals in the development and implementation of forest stewardship plans. From 1992 through 1995 there have been 705 plans

written and certified. There has been a steady increase in the number written each year.

The Wetlands Reserve Program has interested landowners in North Carolina. In the 1995 sign-up, landowners representing 1176.7 acres signed intentions of entering the program. Extension has had the responsibility of developing educational materials and disseminating them to potential counties and landowners.

Approximately 1,100 volunteers provided 2,381 days of service to assist in these programs. In addition, \$672,275 were raised from non-extension sources.

## **SMALL FARMS**

Six hundred fifty-seven small farmers were informed of and accessed USDA services, resulting in \$632,641 in benefits. Six hundred twelve farmers improved their managerial skills by developing and adopting a farm record keeping system. Alternative enterprise opportunities for small farmers were presented to 3,972 farmers, and 658 of them diversified their income stream by adding new enterprises that generated \$1.9 million in additional gross income. Improved marketing plans were adopted by 665 small farmers, resulting in an economic impact of \$1.4 million added income. Six hundred ninety-four minority farmers who own almost 64,000 acres became familiar with way of retaining ownership of their land.

## **NUTRITION, FOOD SAFETY AND HEALTH**

Nutrition, health and food safety programming focused on diet and cardiovascular disease, nutrition for infants and preschoolers, chronic disease risk reduction, maternal and infant nutrition, and nutrition for special needs, handicaps and pregnant teens.

The demand for food, nutrition, and health-related programs in North Carolina is growing daily; this is especially true of programs that educate consumers about health disease prevention, diabetes management, weight control and cancer prevention. Dietary habits are improving slowly and the rising trend of deaths attributable to these chronic diseases is flattening somewhat in response to these dietary changes.

Approximately 441,673 citizens participating in nutrition, diet and health programs increased their knowledge of how to promote health and reduce the risk of chronic diseases by selecting, preparing and consuming foods according to the National Dietary Guidelines.

While proper nutrition is critical to the good health of all Americans, older adults are at disproportionate risk for a number of reasons including: difficulty in eating or

swallowing, low income, adverse drug-nutrient interactions, alcohol abuse, depression, reduced appetite, functional disabilities, impaired taste and smell and others. Over 350 professionals (including home economists) attended and networked during a workshop.

This effort was in collaboration with the N. C. Departments of Environment, Health and Natural Resources (Divisions of Adult Health Promotion and Dental Health), N. C. Department of Human Resources (Division of Aging) and the American Association of Retired Persons (AARP). One of the foci of the program was implementing the National Nutrition Screening Initiative. Results of the first screening of over 10,500 elderly across North Carolina indicated that 69% were at moderate or high nutritional risk.

A good indicator of maternal and child health is the number of babies who die before their first birthday. Maternal and child programs are designed to address the risk factors of infant mortality. Programming in the areas of prenatal care, teenage pregnancy, infant feeding and parent education reached 20,759.

## **FAMILY ECONOMICS**

### Basic Money Management-Financial Planning

Over 56,740 adults and youth gained knowledge of recommended money management, credit control, record keeping, and saving and investment practices during 1991-95; 142% of the 4-year projection of 40,000.

### Elder Care - Financial/Legal/Health Care Planning

North Carolina is far ahead of most states in addressing the elder care information needs of aging and older adults and care givers, with maintenance-level programs continuing on 1) elder care awareness, 2) planning ahead for elder care decisions, 3) volunteer information provider programs, and 4) training family care giver programs.

Approximately 57,491 adults and families gained knowledge during 1991-95 about elder care decision making. This represents 115% of the 4-year projection of 50,000 -- reflecting the self-sustaining, ongoing expansion of elder care programming by Extension.

### Estate Planning and Retirement Planning

Over 21,760 individuals and families acquired information about estate programming and retirement planning during 1991-95; 44% of the 4-year projection of 50,000.

### Improved Housing/Affordable Housing

29,367 individuals and families adopted practices during 1991-95 to improve



housing (through repairing, remodeling or upgrading) to meet family needs through the life cycle; 84% of the 35,000 projection for the entire four years.

#### Consumer Education/Expense Reduction and Consumer Protection.

47,946 adult and young consumers gained knowledge of their marketplace rights and responsibilities in the selection, use and care of consumer goods and services during 1991-95; 193% of the 25,000 4-year projection.

#### Resource Management/Income Production

43,035 individuals and families developed and used skills to increase or extend income during 1991-95; 518% of the 4-year projection of 8,300.

## **HUMAN ENVIRONMENT AND HEALTH**

Special wastes are an emerging problem in North Carolina's waste stream. Educated volunteers continue to provide leadership to the educational efforts in the community, as well as public policy education. Collaborative efforts with other local agencies continue to be an effective outreach strategy. Waste reduction, including enviro-shopping and source reduction, is an emerging area where the Cooperative Extension Service can be a leader. Environmental equity continues to emerge as a community waste issue.

#### Water Quality

Residential water quality issues are still a primary concern for North Carolina residents. During the past four years, major focus has been on residential water quality education and screening programs for lead/nitrates and their health effects, especially on youth and children. 1,230 lead and 1,129 nitrate samples have been screened with over 1,400 participants. Three percent of samples screened for nitrates and 10% for lead had elevated readings. Some homeowners with private wells have had to install new wells as a result of the screening program. Those with elevated lead levels have learned to flush pipes before consuming the water or have plumbing updated or replaced.

#### Energy

During the past four years, county Extension agents reached over 84,000 homeowners, builders, youth, educators and other interested persons with energy education programs. 135 neighborhood energy workshops were held reaching approximately 2,000 residents.

#### Dependent Living

Thirty-three counties reported conducting programs on independent living and life cycle housing. More than 16,497 senior citizens, housing providers, caregivers, and others attended seminars and programs on adapting housing for accessibility and developing skills to maintain independence.

### Environmental Health and Safety

More than 44,484 North Carolina households learned about radon health risks, tested their homes for radon, or adopted measures to reduce radon levels in their homes.

More than 200 homebuilders and county building inspectors received training on radon resistant new construction.

Over 10,000 individuals including private and commercial pesticide applicators, and farm families gained knowledge in selection, handling and laundering of pesticide soiled clothing; with an estimated 6,500 making practice changes.

### **FAMILIES IN CRISES**

Family problems addressed within the parameters of the Families in Crises State Initiative are complex and many have no clear cut solutions. To address the problems of families in crises, the Cooperative Extension Service is striving to collaborate with other agencies and organizations to help families help themselves.

In North Carolina all families are vulnerable to experiencing some type of crisis. Many times a family in crisis incurs economic, social and/or legal stresses. Specialists at North Carolina State University and A & T state University in conjunction with twenty-nine county staffs focused their efforts on developing and implementing coping programs and strategies to help families who are experiencing one or more crises.

Thirty counties implemented 863 programs to reach families in crises audiences as a result of collaborating with 445 agencies.

Eighteen counties presented over 300 work-site programs to 12,104 people in 149 industries.

Thirty-two counties give 321 programs on Family Preparedness for Natural Disasters, reaching 8,876 persons face-to-face. Over 2,067,692 were reached through mass media (radio and newspapers).

Twenty-five counties implemented 2,283 programs targeted at the working poor and homeless, reaching 19,459 persons with family resource management, consumer credit and housing information.

Thirty-two counties reported participating in the Economic Development for Women Project, reaching 1,628 limited-resource women; 98 of whom found a job as a result of the training. Over 450 participants reported developing better self-esteem and increased confidence.

## **4-H PROGRAM MANAGEMENT**

The 4-H club/long term unit by design offers young people an environment in which they can develop communication, decision making, leadership and critical thinking skills that will allow them to become contributing citizens. Over the last 4 years, one thousand three-hundred ninety one (1,391) new 4-H clubs responsive to the needs of youth , families and communities were established. In addition to new unit formation, one hundred four thousand two hundred and sixty three (104,263) 4-H club members were retained. The stability and growth of clubs illustrated program excellence and the quality of club maintenance.

4-H advisory groups which seek to identify needs and implement focused local programs continued to grow in number. Three hundred eighty six new 4-H specialized committees were reported by 87 counties. This is a strong indication of expanding collaboration with the educational, economic, and governmental units valuable to community group systems development, maintenance and renewal. The growth of 4-H Foundations (73) reflect a viable and productive youth program management and community group support.

## **4-H AND LEADERSHIP VOLUNTEER DEVELOPMENT**

The volunteer leadership development program has grown in strength and maturity over the last 4 years. Introduction of the TAXI curriculum has facilitated volunteers assuming more complex leadership roles. Another innovation has been the introduction of continuous quality improvement strategies into the volunteer program.

The Master Volunteer Program has developed a strong volunteer management system with 75 counties now involved in the program. Since 1992, 1,104 volunteers have received advanced training as master volunteers. The youth volunteer opportunities have also increased over the last 4 years. In 1995 sixty nine (69) counties reported teens involved in either a Teens Reaching Youth Program or a Peer Helper Program representing a 46% increase in county participation in the program since 1992. Since 1992, 90,500 adults served as 4-H volunteers along with 29,500 young people.

## **SCIENTIFIC LITERACY OF YOUTH**

Improving the scientific literacy of young people in North Carolina as been supported by 4-H through primarily the school enrichment program and formation of local science clubs. Agents reported that 350,044 youths and 20,410 leaders participated in extension science programs such as embryology, agricultural field days, fire safety, food and nutrition, and economics in action. Young people ages 8 to 13 learned how to avoid home fires, where their food comes from, nutrition, food safety,

soil erosion, recycling, embryology, and economic principles.

Students organized 1,200 4-H science clubs with a membership of more than 23,000.

Teachers find that 4-H school enrichment materials were helpful in the classroom. More than 7,200 teachers reported that students participating in 4-H school enrichment improved their perception of science as shown in increased enjoyment and increased class participation.

Examples of County successes:

In Person County, 100% of the eight classrooms involved embryology reported that science grades increased by at least one letter grade during the quarter in which embryology was taught.

The Embryology Program in Gaston County showed an increase in school attendance of 26%, an increase in class participation of 60%, a 15% increase in students completing their homework and a 18% increase in the quality of home work completion. In addition 40% of the youth showed an increase in science grades and a 33% increase in positive behavior.

Lincoln County used a vermiculture curriculum to capture interest of middle school students. They learned how worms make compost, reproduce, and react to various stimuli.

## **HUMAN DEVELOPMENT NEEDS OF YOUTH**

One of the important goals of 4-H programming is to design educational programs that meet the development needs of youth. During the past four years, an emphasis on training agents and volunteers on human development subject matter has resulted in a conscious shift toward development of life skills and subject matter knowledge through the 4-H Program. Training opportunities in the area of child development occurred through the Child Development Institute cosponsored by the 4-H Youth Development Program and the Department of Child and Family Relations at the University of North Carolina at Greensboro.

The verbal communication skills were enhanced among 7,751 youths participating in public speaking/presentations and 20,609 4-H'ers participating in noncompetitive public speaking opportunities.

The 4-H club is one of the most successful environments we have to teach young people life skills. From 1992 to 1995, 140,000 4-H'ers were enrolled in 4-H clubs giving them an opportunity to gain leadership skills, pro-social skills,

communication skills and planning skills

## HEALTH AND SAFETY NEEDS OF YOUTH

Many counties have been successful in raising the public's awareness of specific safety and health issues affecting young people and adults alike. Though impact assessment was difficult to measure through exhibits, fairs and screening experiences, those that both observed and participated experienced a heightened realization/knowledge as to healthy living or hazard reduction. The preparation and management of such exhibits by the young people themselves was an experience that prepared them to handle specific situations and develop the confidence to share with others what they have learned. Agents reported sponsoring 101 exhibits, screening and health fairs targeting youth health and safety need of youth reaching 64,045 participants.

"Peers Empowering Peers" is a program designed to provide educators with the resources to establish and manage peer based, prevention programs which are productive, renewing and collaborative. This program continues to be funded by grants from the United States Department of Education at the Alcohol and Drug Defense Section of the Division of Student Services of the North Carolina Department of Public Instruction. Fifty-five teams involving one hundred seventy-eight educators representing thirty-three counties received the ten hour core training. Given average productivity, between four and five hundred middle school peer mediators have been trained each mediating three conflicts a week; therefore, a conservative estimated of twelve hundred conflicts have been resolved. PATH (Peer Athlete Team Helper) program was packaged in collaboration with the N.C. High School Athletic Association. This program targeted steroid/drug risk reduction by athletics by using a mentor relationship between junior or senior athletics and ninth or tenth grade rookies. Focus of the program was on academic and athletic performance. The program was piloted in six schools in New Hanover County with twenty four educator/coaches involved with 120 athletes to target steroid/drug risk reduction. The program has also involved an additional thirty-seven educators/coaches and approximately four hundred and twenty mentors and rookies in the Cumberland County Student Athlete Summer Institute and sixteen high schools.

SAFE (Sexual Attitudes Family Education) program was conducted in Ashe County involving all elementary school students in the county. Project Graduation drew 93% of the high school seniors in Ashe County in 1994. The county can boast of no incidents of injury or crime on graduation night due to alcohol or drug abuse over the last three years since the project began.

EFNEP received a Cooperative Extension Service and Women, Infant and Children Project Grant to develop and pilot a curriculum for pregnant teens. Two counties participated in the study with 82 women enrolling of which 60 were

pregnant. A pre/post curriculum survey indicated increased knowledge in prenatal diet requirements, skill development in food preparation and planning of balanced meals, and practiced adoption of prenatal health practices that lead to positive outcomes of the pregnancies. The average birth weight for the babies was 7 lbs., a pound and a half above the 5 1/2 lbs. minimum standard. Only 5 births were below low-birth weight. Three of those 5 were within 2 ounces of the minimum. Those babies that were above low-birth weight were able to leave the hospital within the normal stay of delivery avoiding expensive hospital cost.

## **CARE AND EDUCATION OF SCHOOL AGE CHILDREN**

Improving the quality and quantity of school age child care is a priority of the 4-H Youth Development Program. Approximately 37 counties have reported involvement in school-age child care. The school-age child care program varies from county to county. Some counties worked with existing child care programs to provide 4-H curriculum and organize clubs at the sites while others have employed personnel to manage 4-H organized after school sites. The 4-H agent or school-age child care manager acted as a resource person for child care providers and parents, collaborated with public schools and private sites to start new programs or increased the size of existing sites, acted as a curriculum resource person for school-age care providers and coordinated training for school-age child care providers. Since 1992, 22,491 children were served by child care programs established with Extension involvement. Over 2,400 children were placed in newly created child care slots created by Extension. Another 71,845 children were served by child care programs that use extension curriculum.

Thirty three counties reported that 1,310 child care facilities improved the quality of their program as a result of Extension child care training and support.

This program is an excellent example of partnerships. Locally, Extension Agents have formed partnerships with agencies such as local school systems, day care providers, YMCAs, and public recreation departments to improve the quality and quantity of child care in their community. The 4-H Youth Development has formed partnerships with the Department of Human Resources, Child Care Division and the Corporation for National and Community Service Care. Since 1992 over \$1,600,000 have been received by the 4-H Youth Development Department to support this program, with much of the funding going directly to support county programs.

Agents in 37 counties reported training over 6,792 child care providers. The providers gained knowledge in food preparation and nutrition, scheduling, summer planning, discipline, developmental characteristics of children, space utilization and stress reduction. They also learned how to use 4-H Activity Boxes and 4-H curriculum such as Puppet Making, Talking with TJ, Ghost Writer, Kids and Gardening and Crafts. Child care providers also received First Aid and CPR training.

## **SPECIAL NEEDS POPULATION**

The Special Needs Population in 4-H Programming focused on primarily adjudicated youth, teen parents, youth in diverse/public housing, impaired youth, partners-in-learning participants (5-8 year olds) and youth EFNEP participants. Accomplishments can be illustrated as follows:

1. Eighteen thousand six hundred sixty five (18,665) youth from special need populations increased their self-esteem, family communications skills, parenting skills and other life skills through involvement in educational experiential activities and support groups.
2. One thousand one hundred twenty nine (1,129) teen parents gained knowledge in child growth and development and care, stress management, parenting skills, effective parenting techniques, and self-esteem.
3. Four thousand seven hundred ninety (4,790) youths residing in Diverse Housing gained better decision making skills, exhibited an increase in positive behavior, and developed a positive attitude toward themselves.
4. Through the Partners-in-Learning program, two thousand six hundred forty three (2,643) youths participated in Cloverbud camps and community-based programs.

## **ENVIRONMENTAL STEWARDSHIP**

Environmental education programs at the 4-H Centers were offered for 28 weeks each year. The program involved 7,403 youth and 599 adults in residential programs generating 96,024 hours of contact with the curriculum. An additional 9,996 youth and 651 adults participated in day programs resulting in 63,882 curriculum contact hours. A total of 70 different schools from 23 counties took part in the programs over the four years.

Over 13,800 young people participated in a minimum of 6 hours of environmental education as participants in the 4-H summer junior camping program. The junior camping program and specialty camps gave campers an opportunity to learn outdoor skills, recreational skills, to develop an appreciation of the environment, and through group living continue to develop communication skills, teamwork, leadership skills and decision making. Some of the environmental concepts campers learned were relationships between organisms and their habitat, how elements are recycled by the environment, respect for living things and life cycles and how energy is transmitted

through the environment.

Teachers and agents have learned to design and support after school environmental education clubs. During the past four years, 1,200 science clubs have been formed to serve an audience of over 23,000 elementary and middle school youth. The majority of these clubs included environmental science as the primary focus.

The accomplishments reported in this overview represent only a portion of the 4-H programs youth have participated in throughout the year. In summary, 4-H'ers have been involved in over 1,800,000 educational experiences each year. Most of the learning experiences were between 3 and 6 hours in duration and were taught by trained volunteers. Major categories of participation annually were around:

Animal Science and Poultry	125,412
Natural Resources	103,497
Energy and Engineering	58,679
Health and Safety	52,078
Family Resources and Nutrition	54,362
Citizenship and Community Invol.	36,584

Local 4-H programs were designed to meet the needs and strengthen children, families and communities. Many of the needs addressed in the last 4 years remain with us today. As we plan for the future, we will continue to address the issues of developing supportive programs that foster positive growth in young people, school age child care, youth-at-risk, environmental quality, and other many others.

The partnership of ES-USDA and the land grant universities in North Carolina has resulted in a significant 4-H youth outreach program.



## Civil Rights Report - Summary for 1992-95 Plan of Work

### CR01 - Civil Rights Training

#### A. Objectives

##### Overall:

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

All employees of the North Carolina Cooperative Extension Service are to understand the human aspects of Civil Rights.

##### Specific:

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 period of 1992 through 1995 was extremely busy in the area of Civil Rights training. Most of 1992 was spent planning for an in-depth Civil Rights training that was launched at the November 1992 State-wide conference. A comprehensive Affirmative Action plan was written as a key resource to this training. In 1992 all county staff received a full day of Civil Rights training. This training included a broader view of diversity in addition to the standard Affirmative Action principles. In 1993 one day of in-depth diversity training for all faculty was provided at the annual state-wide conference. The training on diversity has been expanded and now includes sensitivity to the disabled as well as an extensive list of other aspects of diversity (education, culture, religion, etc.).

The approach since the comprehensive training has been to keep the topics refreshed. New faculty attend orientation training in which Civil Rights and related Affirmative Action issues are introduced and explained. Monthly administrative video briefings have been used to remind all employees. Because of related travel expenses, video will most likely be used more frequently in the next Plan of Work.

C. Implications

The training opportunities provided critical knowledge and skills to facilitate the continuing commitment to Civil Rights. The training was well received and the overwhelming realization by the state teams was that the county faculty truly wanted to do what was right as opposed to simply meeting minimum legal expectations.

The summary data reflect an overall progress in minority representation. As a result, the training efforts are considered to have been successful.

## Civil Rights Report - Summary for 1992-95 Plan of Work

### CR02 - Public Notification

#### A. Objectives

Overall:

That all people who can benefit from Extension educational programs be aware of their availability.

Specific:

1. Every county be accountable for a public notification plan.
2. Make organizations which request Extension assistance aware of Extension position on non-discrimination.
3. Adopt and utilize on all printed material a common non-discrimination statement.

#### B. Indicators of Success and Accomplishments

This four year period has been very successful in the area of public notification. Every county is made accountable through annual reporting; there is a specific form to report public notification efforts. All printed material now has a prominently displayed non-discrimination statement. All counties were provided the "And Justice For All" posters for display.

For the first couple of years into the plan, each effort was tallied (i.e. how many counties used newspapers). In every category we found that more than a third of the 100 counties focused public notification efforts beyond minimum requirements. County reports indicate the frequent use of mass media, personal contacts with minority leaders, posters placed at grocery stores and other high volume businesses, announcements on school intercom systems, networking with other agencies to market our programs, and providing information to migrant workers' crew leaders for dissemination.

The organization began a 1-800 phone line that individuals can call anonymously with any complaint. There have been no civil rights related complaints on this line.

#### C. Implications

This was the first plan of work cycle following the now famous, 19 year old Bazemore case; this case dealt with charges of salary inequities of employees. The organization has shown great effort in ensuring that public notification standards are not only met but surpassed.

## Civil Rights Report - Summary for 1992-1995 Plan of Work

### CR03-On-Site Civil Rights Compliance Review

#### A. Objectives

##### Overall:

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

##### Specific:

1. All counties to determine their present level of participation of various groups and set numerical goals for reaching underserved/underrepresented groups.
2. All counties not in compliance to show progress toward compliance within the 4-year period.

#### B. Indicators of Success and Accomplishments

North Carolina has 100 counties and 1 Cherokee Nation Reservation. Comprehensive Program Reviews/Reports are scheduled on a biennial cycle so that 50 are done each year. During the Plan of Work, several strategies were enacted to accomplish the stated goals. A "check-off" form was designed for the review team to utilize in examining Civil Rights data in the county. The performance appraisal process and related documentation was revised to include an assessment of Civil Rights programming efforts. This actually is a component of on-site review and is done with every employee annually by the District Director/County Director team. The annual reports from all counties include data on public notification, program delivery, all reasonable efforts, and club membership summaries. These are forwarded to the District Directors and Personnel Director (Affirmative Action Officer) who in turn can review and provide individual feedback and strategies on a regular basis. The purpose here was intended for Civil Rights strategies to be recognized as a daily part of one's responsibilities as opposed to an annual event.

#### C. Implications

The Civil Rights/Affirmative Action Officer retired last year. The Federal Early-Out Retirement options also allowed three of the seven district directors to retire during the past four year cycle. The overall responsibilities of Civil Rights/Affirmative Action were reassigned to the Personnel Director. The new District Directors and the Personnel Director have been working to ensure that the necessary attention continues to be devoted to these efforts. The bottom line result is a good basis on which to build the next plan of work.

## Civil Rights Report - Summary for 1992-1995 Plan of Work

### CR04 - Equal Employment Opportunity

#### A. Objectives

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

Specific tasks associated with the objectives and related activity during the past year are as follows:

1. Enlist the help of all current employees to locate and recruit minorities.

This four year period was very busy in terms of recruiting. Video briefings were used to encourage current faculty to assist in recruiting minorities. A new recruiting brochure was developed to enhance the image of the organization as a career choice. Agents were given the opportunity to accompany recruiters as their schedule permitted.

2. Continue intern programs which are aimed at creating an interest in employment with Extension.

The intern program generally had three minority students each summer who were studying agriculturally related disciplines. The internship served to make the graduates more marketable and all interns were able to find better paying jobs elsewhere. As a result of funding concerns, it is unclear whether this program will receive funding in the future.

3. Aggressively recruit at traditionally black and female institutions in the southern region.

Our goal is to ensure that at least 1/3 of all recruiting efforts are done at colleges traditionally focused towards females and minorities. This goal has been met annually. We focus on traveling to institutions either within North Carolina or mostly within a contiguous state. (Institutions include: NC Central, Virginia State, Meredith College, Tennessee State, NC A&T, Fort Valley College, Tuskegee, and Pembroke State University.) Position vacancy announcements are sent to all 1890

Institutions. We also revised and reprinted placement notebooks and distributed to college placement offices.

4. Train within for progression to leadership positions.

The organization has done well in promoting minorities and females to the position of County and District Director. Currently, 19 (20%) of the 93 county directors are female, 11 (12%) are black and 2 are American Indian. The seven member district team has three white females and two black males.

5. Monitor employment procedures to ensure that qualified minorities are given equal opportunity to available positions throughout the organization.

Standardized University employment procedures remain in place; no changes.

#### C. Implications

The table below outlines faculty and staff population for county operations. Overall there was little statistical change during the four year period in race. We began the period with 21% black employment in EPA (faculty) positions; we ended the period with 20% representation. The general state-wide black population is 22% so we are very proud of our continuing balance in representation.

**EPA EMPLOYEES**  
**RACE BY GENDER**

	Sept. 30, 1991			Sept. 30, 1995			Change		
	M	F	Total	M	F	Total	M	F	Total
Black	30	104	134	27	104	131	-3	0	-3
White	260	249	509	241	271	512	-19	+22	+3
Other	1	8	9	0	12	12	-1	+4	+3

**Gender Only**

Males	291		268			-23
Females		361		387		+26

**SPA EMPLOYEES**  
**RACE BY GENDER**

	Sept. 30, 1991			Sept. 30, 1995			Change		
	M	F	Total	M	F	Total	M	F	Total
Black	0	39	39	0	33	33	0	-6	-6
White	0	186	186	0	196	196	0	+10	+10
Other	0	0	0	0	2	2	0	+2	+2

**Gender Only**

Males	0		0			0
Females		225		231		+6

## Civil Rights Report - Summary for 1992-95 Plan of Work

### CR05 - Program Delivery

#### A. Objectives

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 reflect all groups in the state with regard to race, age, sex, disability, color, national origin, or religion.

#### B. Indicators of Success and Accomplishments

As part of the Plan of Work, all counties developed a program delivery plan. Progress was projected in minority representation on the county Advisory Leadership System and Extension group participation. Counties completed community mapping data for reporting and comparison of group enrollments. Focused efforts included parallel examples of Public Notification such as personal contacts in addition to program delivery efforts such as relocating program offering locations and times, recruiting club leaders from minority communities, and specialized efforts on topics such as composting and pesticide education.

The large majority of counties reached parity of representation on their Advisory Leadership Councils during this four years.

#### C. Implications

After the completion of the mapping, agents could see the impact of some of their program delivery efforts in the past. There was an overall heightened sensitivity to program delivery efforts.