

NORTH CAROLINA COOPERATIVE EXTENSION SERVICE ANNUAL REPORT 1993

PROGRAM OVERVIEW

The North Carolina Cooperative Extension Systems Annual Report for 1993 documents accomplishments in support of the system's long-range plan of work "Visions for the Future". "Visions" commits the North Carolina Cooperative Extension System to deliver educational programs that contribute to a productive and profitable agriculture; a protected and enhanced environment; stable communities; responsible youth; and strengthened families.

The annual report compiles information from 100 counties, the Cherokee Indian Reservation and 46 state program task forces. The report represents a coordinated educational program conducted by the state's two land-grant universities, North Carolina State University and North Carolina Agriculture & Technical State University.

This year the System launched its second strategic plan "Our Commitment to Excellence". The strategic plan, when compiled with the System's 4-year plan of work, "Visions for the Future", provides the basis of a coordinated educational process to help North Carolinians improve the quality of their lives.

HIGHLIGHTS OF NATIONAL INITIATIVES

Rural Revitalization

Strategic plans/economic analyses which identified opportunities for diversification, deterrents to development, and/or infrastructure improvements were started in 126 communities. Over 11,000 citizens demonstrated improved leadership and problem solving skills. Increased economic knowledge was demonstrated by 3,830 young adults and emerging leaders. Almost 500 entrepreneurs were assisted to analyze their enterprises and the estimated investment in new business start-ups with extension assistance totalled over \$13 million. Extension worked with 420 communities who planned or initiated beautification projects and assisted 267 communities with waste, water supply or waste-water management problems.

Sustainable Agriculture

The Sustainable Agriculture Task Force, composed of specialists, agents, researchers and representatives of non-governmental and governmental agencies, provided leadership for programs in sustainable agriculture. Programs were conducted for training agricultural professionals, to develop linkages and working relationships, and to assist farmers in implementing sustainable concepts in their farming systems. Sustainable agriculture systems training was provided to 41 Extension agents. A forum dealing with several issues related to sustainability of agriculture was held, with 175 people with diverse interests in attendance. A number of people participating in the forum from non-government organizations, government agencies and the farming community also are members of the task force advisory committee. This committee assisted in developing a Kellogg proposal, and attended a southern region workshop. In planning and delivering educational programs, Extension faculty conducted 42 sustainable agriculture programs and initiated or continued 190 sustainable agriculture demonstrations. Based on report data from counties, 4989 farmers implemented one or more sustainable farming practices.

Water Quality and Waste Management

Over 18,000 individuals attended 639 meetings to discuss water quality policy, and 7,854 inquiries were received regarding drinking water quality. Five thousand farmers started applying nitrogen at rates based on realistic yield expectations on 340,000 acres. Five hundred forty-two farmers installed new drainage control structures to reduce nitrate concentration on 51,075 acres.

Best management practices to reduce soil erosion and surface water contamination were implemented by 7,500 landowners on 48,694 acres.

Four hundred seventy-seven farmers calibrated spreaders and irrigation systems to apply manure at optimum rates and application patterns on 53,636 acres resulting in a reduction of approximately 25% in the amount of manure applied per acre. Almost 10,000 individuals initiated backyard composting, 52,025 reported more environmentally responsible purchasing decisions and 280,093 increased participation in recycling programs reducing waste going to the landfill by approximately 80,000 tons. Extension also assisted 443 communities to implement new recycling programs.

Food Safety and Quality

Over 8,000 participants adopted safe food handling practices such as temperature control and sanitation that minimize risk; 1800 participants adopted practices that protect the food supply, including appropriate use of drugs and chemicals in agriculture and safe food processing. 2726 participants increased their knowledge of food safety public policy issues. Over 9,000 program participants increased their knowledge of the risks and benefits of specific food components, processing technologies or food protection chemicals. Over 800 pesticide applicators received certification, with 2,020 receiving recertification.

Health and Human Safety

Over 43,000 adults and youth participated in programs aimed at increasing knowledge about or changing attitudes or behavior affecting health status or preventing disease and injury. 14,449 community leaders and members participated in workshops, seminars or other specific educational opportunities. Over 3,000 farmers and farmworkers or their families participated in programs on the proper use and handling of pesticides and the correct use of pesticide contaminated clothing. 18 counties and 80 local communities organized and maintained on-going health promotion and disease and injury prevention programs. 57 Extension Agents in 18 counties collaborated with interagency colleagues to initiate or expand networks and coalitions to increase and strengthen community health.

Youth-At-Risk Initiative

This program is 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. Effective youth-at-risk programming must be holistic in its design and involve the expertise of various groups and agencies. The North Carolina Cooperative Extension System has provided leadership in building coalitions and designing educational programs for youth in high risk environments. Over 140 coalitions in 39 counties worked together to address youth-at-risk issues. In addition, 70 long-term coalitions were established to help monitor the long term effect of youth-at-risk programs and help develop goals. The agents secured over \$853,000 to support youth-at-risk work.

Youth-at-risk programs had a positive impact on youths. Over 600 adjudicated youth reduced their involvement in the judicial system. Nearly 10,000 youths have improved their academic performance as a result of Extension programs. Improved study habits, increased school attendance, and reduction out-of-school and in-school suspensions also occurred. Career training and preparation were provided to over 8,000 youths. Youth-at-risk are being mainstreamed into 4-H and are increasing their knowledge of numerous 4-H subject matter areas. These youths are participating in summer day and residential camps, public speaking and fashion revue contests, county fairs, presentations and various citizenship and leadership roles.

HIGHLIGHTS OF STATE INITIATIVES

Alternative Income Opportunities

Nine thousand six hundred fifty-six individuals increased their awareness of income diversification, alternative income opportunities and how to properly analyze, evaluate and integrate alternative income opportunities into their current farming operation or traditional livelihood. Over 150 individuals generated an estimated gross income from alternatives of \$570,000 or \$3,757 per individual. Twenty-four new small/part-time farmers joined the "Ways

to Grow" program bringing total participation to 49. Enterprises include meat goats, catfish, llamas, plastic culture strawberries, cantaloupes, lettuce, greenhouse vegetable production and oriental vegetables.

Environment and Conservation of Natural Resources

Almost 300 elected and appointed officials increased their knowledge of forest management, wetlands, endangered species, or air quality issues. Interest in the Stewardship Forest Program continued to increase with training programs offered to 75 professionals on how to incorporate wildlife into stewardship plans. There are now over 175 certified forest stewards in North Carolina. Re-establishment of longleaf pine continued - 74 new acres were established and over 300 landowners, agency representatives, industry and members of conservation organization participated in a workshop to discuss ways to work together to increase coverage and uses of longleaf pine. Multiple use management of forest land increased with 57 new wildlife management plans developed impacting 66,000 acres, and 24 landowners leasing land for recreational purposes with an annual income of \$102,000. Over 300 pond owners improved fish production and water quality. Gaston County implemented a major program to improve air quality involving government, business and industry, youth and interested adults.

Eighty-six new wildlife management plans were developed impacting 70,874 acres. Fifty-two landowners started leasing land for recreational purposes. Over 400 pond owners improved fish production and water quality impacting 1,153 acres. Two hundred nine elected and appointed officials increased their knowledge of forest management, endangered species and air quality issues. Three thousand new acres were established in longleaf pine and 20 acres in Atlantic white cedar. The importance of the later in the reforestation of wetland areas is only beginning to be appreciated.

Families in Crisis

Of the twenty-six counties who identified results for this program, eighteen counties implemented 258 programs to reach Families in Crises as a result of working with 181 agencies. Nine counties presented 62 work-site programs at 54 different industries, reaching 1,699 persons. Individuals learned how to improve family and financial decisions, as well as gained important life skills.

Eleven counties implemented 78 programs targeted at the working poor, reaching 2,321 persons with family resource management and consumer credit information.

Twenty-one counties gave 180 programs on Family Preparedness for Natural Disasters, reaching 7,200 persons; and with mass media (radio and newspapers), 1,741,500 persons.

170 Day Care Workers increased their knowledge of child development, health and safety practices, and nutrition by attending Day Care Association classes; and 165 high risk parents were taught child development, parenting and nutrition skills.

HIGHLIGHTS OF STATE PROGRAMS

Farm Business Management

Results of this year's efforts exceeded expectations in number of clientele reached. Over 3,000 employers of agricultural labor improved their understanding of labor rules and regulations; in one county the value of labor assistance received via the H2-A program provisions was \$982,000. Almost 4,500 farmers and tax preparers improved their understanding of income tax laws and tax management; 3,000 farmers, agribusiness and agency personnel improved their understanding of domestic food, agricultural trade and environmental policies; and 5,000 farmers improved their management decision making skills. Two hundred seven farmers participated in an electronic business records program, FBMS, providing the basis for accurate "on farm" bench mark production and financial data for farmers, lenders and agency personnel; and 404 new farmers adopted some other formalized record system. One hundred fifty-seven lenders improved their understanding of FBMS and integrated financial analysis.

Livestock Production, Processing and Marketing

County accomplishment reports indicated a significant increase in livestock production and the number of producers. Almost 1900 new producers are in business, producing about 1.2 million additional animals; 98% of the additional production was represented by hogs. Eight hundred forty-eight producers began management intensive grazing practices, involving about 25,000 grazing animals. Nine hundred fifty producers used forage/feed testing services and 1,022 producers planned feeding programs by using ration formulation capabilities. Three hundred sixty-five growers made needed improvements in housing ventilation and animal handling equipment. Marketing strategies were improved by 1,436 producers, impacting over 500,000 head of livestock, with over 90% being hogs. Five hundred nineteen growers started or expanded grazing cattle on pastures fertilized with animal waste, with a total estimated impact of \$1,419,730. In addition, 387 producers initiated or expanded integrated pest or reproductive management (IPM or IRM) approaches in their operations. Over 300 producers began production and/or business management records programs. Small farm livestock enterprises were begun on 378 operations, many with small ruminants. Other efforts improved the knowledge of over 28,500 producers on animal welfare, environmental and food safety issues. Particular efforts have involved milk and dairy-beef quality assurance programs. Two hundred forty-one thousand citizens enhanced their knowledge of animal welfare, environmental and food safety issues through extension programs.

Poultry Production, Processing and Marketing

Several objectives for the four year plan have already been exceeded. Efficient lighting technologies were adopted this year by 134 growers in 203 houses resulting in savings of approximately \$100,000 a year. Efficient ventilation was adopted by 262 growers in 473 houses and labor saving technologies by 269 growers in 480 houses. One hundred twenty growers were

assisted in building new houses; 620 gained knowledge of keeping enterprise records; 240 growers and service personnel received training in biosecurity principles and medication/vaccination techniques; and 1,348 regularly monitored pests and ectoparasites. Four hundred ten growers implemented mortality composting, and 614 growers used other mortality recycling technology in a total of 2,603 houses. This removes approximately 11,000 tons of dead birds from the waste stream annually.

Aquaculture and Commercial Fisheries Production, Processing and Marketing

New aquaculture production units increased as follows - acres of ponds - 55, tanks - 7, and raceway volume - 60,460 cu. ft.. Production from new units amounted to 253,500 pounds. Over 9,000 individuals increased their production, processing and marketing knowledge. Improved management and disease control resulted in an 11% increase in catfish production and 3% increase in trout production equivalent to approximately \$360,000 of additional sales income. Hybrid striped bass production remained stable at 600,000 lbs. with a pond-bank value of approximately \$1.5 million. Coldwater aquaculture showed slow growth of about 5% with profit margins extremely variable among farms. Emphasis was placed on waste management, record-keeping and improved product marketing.

North Carolina provided regional/national leadership in development of recirculating aquaculture systems, and in training on application of Hazard Analysis Critical Control Point (HACCP) principles for seafood processors.

Field Crop Production, Processing and Marketing

Advances were made in the adoption of recommended nutrient management practices and systems. In Burke County, increased use of organic nutrients coupled with manure and soil testing by corn growers lowered environmental impacts and reduced nutrient costs by over \$200,000. Statewide use of soil testing increased approximately 10%. Tobacco and soybean farmers applied 3.6 million fewer pounds of phosphorus. Twenty-eight percent of farms implemented new soil management Best Management Practices (BMP's) during 1993; nearly 70% of farms now utilize at least two BMP's for soil management. Over 45% of field crop growers have adopted a system of three or more integrated pest management and crop management (IPM/ICM) practices impacting nearly 2.2 million acres; many other growers use one or two practices. Water table management systems are being used in approximately 20% of poorly drained soils in the coastal plain and tidewater counties. Increasing numbers of farmers took a more comprehensive approach to marketing their field crops. Estimates indicate that 37% of soybeans were marketed using a strategy other than farm storage and direct sale. Efforts to increase tobacco quality resulted in a 12% increase in high quality tobacco marketings and a 28% reduction in very high MH residues.

Commercial Horticultural Crops Production, Processing and Marketing

Vegetable production is increasing in quantity and efficiency. In 1993, 35 growers purchased precision seeders improving seedling emergence and uniformity on almost 3,000 acres. Approximately 350 growers planted 1,654 acres for niche markets, with onion production increasing from almost nothing three years ago to 71 growers with 493 acres in 1993. Strawberry production on black plastic increased from 450 acres in 1991 to 750 acres in 1993. Over 500 vegetable growers adopted IPM programs impacting 20,000 acres. Approximately, 750 horticultural crop producers developed marketing plans and 355 invested in equipment to improve post-harvest handling reflecting the trend for growers to become more sophisticated in their approach to marketing. Increased concern about nutrient management was shown with 1300 growers starting soil testing on 22,000 acres, 318 growers using tissue analysis on 10,000 acres and 388 growers using composted organic waste on 2,000 acres. Many greenhouse floral growers are retrofitting greenhouses to recycle irrigation water to meet run-off standards. Approximately, 40% of the woody ornamental container nurseries either capture and reuse run-off water or have plans developed to install systems.

Urban Horticulture, Forestry and Pest Management

The demand for urban horticulture information continued to grow. The number of urban clientele attending extension meetings, demonstrations and tours increased approximately 10% in 1993 - 50,000 participated in meetings and workshops and 200,000 requests for information were received. Thirty-three counties trained a total of 669 Master Gardener volunteers who contributed the equivalent of almost \$250,000 a year in volunteer time. It is estimated that 5,000 horticultural professionals and 100,000 homeowners adopted practices recommended to improve environmental quality including grasscycling, composting, landscaping to protect water quality and proper pesticide and fertilizer use. One hundred forty-one local governments and communities were assisted with urban forestry management plans and practices. An urban forestry/horticulture reference library was established in each County Extension Center with support from America the Beautiful funds.

Forest Resources and Wildlife Production, Processing and Marketing

Forest landowners increased their earnings by \$3,700,000 using improved forest management and marketing techniques. Over 750 landowners developed forest management plans and began to practice good forest management principles impacting 231,000 acres. Over 900 loggers participated in silvicultural and forest management workshops as part of a new Professional Logger educational program. Twenty-eight firms adopted new manufacturing techniques saving \$757,000. Extension was involved in the creation of 78 new jobs in new or expanded wood products manufacturing facilities. A major initiative in cooperation with industry was launched in value added manufacturing for both softwood and hardwood producers. Almost 20% (500) Christmas tree growers started soil and plant tissue, and 55% of trees sold were USDA grade one or better. Over 8,000 new acres were leased for wildlife activities and landowner income increased by \$344,000.

Nutrition, Food Safety, and Health

106,955 citizens 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. 27,897 persons with dietary risk factors made positive changes to reduce and manage their risk.

30,064 families gained knowledge to help them provide a healthier diet for their children and teach their children health, diet and lifestyle habits.

5,382 participants in maternal nutrition programs gained knowledge and skills that led to a more healthy pregnancy outcome for both mothers and infants.

30,591 persons gained knowledge of food handling practices and other practices that agriculture-related food risks could endanger the safety of the food supply.

Family Economics

28,681 youth, adults, families gained knowledge of basic money management, credit control and record keeping practices. 31,140 individuals/families acquired information about the need for coordinating legal, financial and health care decision making for personal dependency. 11,181 individuals/families acquired information and made plans about their estate and retirement planning.

36,914 individuals/families adopted practices to improve their housing by repairing, remodeling, or upgrading so that the house meets family needs throughout the lifecycle.

35,834 youth, adults and families gained understanding of their marketplace rights and responsibilities in the selection, use and care of consumer goods and services. 26,279 individuals and families developed and used recordkeeping skills and financial procedures to increase or extend their income.

Family Development

Seventy-five percent of 12,395 parents and youth acquired knowledge and skills associated with effective parenting. Over 3,000 individuals in parent-youth programs reported improved relations, with over 8,000 parents and youth using effective family coping strategies.

2,791 volunteers assisted with delivering family development programs.

Over 5,000 child care providers adopted recommended practices for classroom management, scheduling, and curriculum development; 3,252 child care workers were certified in the American Red Cross Child Care Course, Sesame Street Preschool Education Program and other certifiable child care programs.

8,608 family members increased their knowledge and adopted recommended practices to improve communication skills, stress management, family and work conflicts, interpersonal relationships, decision making and other supportive skills.

3,983 limited resource parents increased their knowledge and skills in effective parenting, child growth and development and building family strengths.

Three hundred forty-seven master volunteers were trained to deliver family development programs. Over 3,063 families and individuals benefitted from volunteer programs, such as Master Parents, Volunteer Adult Sitters Program and Volunteer Information Provider Program.

51,627 individuals participated in Family Development Programs.

Volunteer Development and Management

Over 1,500 volunteers received training to be a county or state master volunteer in 1993. With 73 volunteers reporting, the known outreach of the program to volunteer leaders and was 2,715 people. Thirty-one counties have teens involved in peer helper programs; 645 graduates were reported in Home Economics master and other volunteer programs; resource development funds received were \$158,945; and membership in Home Economics volunteer programs was 27,923. Over 16,000 North Carolina Extension Homemakers Association members participated in issues-based programs such as literacy, environment and family issues, and over 600 partnerships, network and/or alliances with other agencies, groups, organizations, associations were established.

Human Environment and Health

Almost 89,000 families, adults and youth adopted one or more recommended waste management practices of recycling, reducing or reusing various products in the home or community. 30,993 households adopted one or more recommended residential water conservation or water quality measures. 31,478 households and housing providers adopted one or more recommended practices to conserve energy or improve energy efficiency in their homes and communities. 4,857 families, individuals and housing providers gained knowledge about independent living strategies. 46,276 families, adults and youth gained knowledge of personal environmental health and safety practices.

Fourteen counties participated in Master Waste Manager programs, using 150 trained volunteers to conduct over 4,000 hours of community education and outreach in North Carolina.

Drinking water education and testing programs were implemented in at least 50 counties. One county was selected to be a national pilot site for a "Blue Thumb" community water quality program.

More than 36,000 North Carolina households learned about radon health risks, tested their homes for radon, and adopted measures to reduce radon levels in their homes.

4-H Program Management

The overall participation and 4-H Program Management data illustrate the continued strength of the program. Seventy three agents reported receiving a total of \$1,847,515 to support local 4-H programs with \$864,029 being raised through grants. In 1992-93, 190,000 children were active in 4-H along with 45,153 youth who participated in a variety of other extension programs. Of the 34,582 4-H club members reported in 91-92, 61% (21,030) were retained in 1993 while 349 new clubs were organized. The increase in specialized committee formation (87 new committees) and continued growth in the number of county 4-H Foundations (58 foundations) reflect a viable and productive youth program management and community group support system.

4-H Leadership and Volunteer Development

4-H Leadership and Volunteer Development is critical to the continued success of North Carolina 4-H. In 1993, 26,541 caring adult elected to share their skills with 4-H'ers and the local 4-H programs. The expansion of the master volunteer roles and the teen peer-helper program are the foci of this state major program. Two hundred seventy-five (275) master volunteers representing 38 counties were trained this year bringing the total master volunteers trained over the last 5 years to 600. Peer-helper programs are an excellent avenue for teaching life skills and keeping older 4-H'ers involved. Not only did the 1,782 teens reach 17,978 participants with important information but the teenagers learned valuable teaching skills as a result of their role as a peer helper.

Scientific Literacy of Youth

4-H is in an excellent position to assist in improving the Scientific Literacy of Youth. Agents reported that over 94,000 youths and 3,632 leaders participated in extension science programs such as embryology, agricultural field days, fire safety, forestry, economics in action, and wildlife. Because of this involvement in 4-H, students organized almost 200 4-H science clubs with a total membership of 6,178. Teachers found 4-H school enrichment materials helpful in the classroom. Over 2,000 teachers reported that students in school enrichment improved their understanding of science. In Alexander County, 68% of the participating teachers stated that science based school enrichment increased their students understanding of science. In addition, the science coordinator stated that school enrichment curricula helped her teachers handle difficult concepts through hands-on learning.

Human Development Needs of Youth

An important corner stone of 4-H programming is to design educational programs to meet the developmental needs of youth (Human Development Needs of Youth). Many of our traditional 4-H programs reflect our commitment to helping young people develop basic life skills. Verbal communication skills were enhanced among 5,053 4-H members through

presentation programs, public speaking events, 4-H entertains and arts programs. One county reported that 48 youths taught 1300 people while in another county 78 youths reached 2500 others. Over 180,000 young people gained recordkeeping and written communication skills by completing one or more 4-H projects. In addition, 579 cumulative records were turned in for competition. Youth participated in a wide variety of subject matter including 6,856 youth in county and state government programs, 2,535 young people in child care, 4,229 in consumer education and 14,633 in the dramatic arts.

Health and Safety Needs of Youth

The Health and Safety Needs of Youth comprise another 4-H State Major Program. Programs conducted under this area included alcohol and drug abuse programs by 4-H Peer Teams, skin cancer prevention programs by TRY-ACT Teams, health fairs and exhibits, and a variety of special interest programs that included bike safety, fire safety, nutrition, self-esteem and healthy life styles. Lenoir County reached over 8,000 people through exhibits that targeted personal safety, home safety and farm safety. Lenoir also has a strong tradition of fire safety education. Delivered by firemen, all 5th graders were targeted. The culminating activity is a countywide 4-H Fire Quiz Bowl.

Care and Education of School Age Children

For thirty nine (39) counties, the Care and Education of School Age Children was a priority. In 1993, over 22,000 children were served by child care programs using extension curriculum and another 4,403 children were in programs established with extension involvement. Providing staff training to child care providers is one way Extension has helped improve the quality of child care in participating counties. Agents trained a total of 1813 child care staff members in a variety of child care topics and issues during the year. Three hundred twenty four (324) child care facilities reported improvement in the quality of their programs as a result of extension child care training and support. In an effort to improve the quality of school-age child care and increase the availability of child care services in communities, 17 counties were awarded over \$318,000 to establish Child Care System Manager Programs to bring the total number of Systems Managers to 29.

Special Needs Populations

While 4-H is available to all youth of North Carolina, special efforts are made to target and program for Special Needs Populations. Special needs populations included youth residing in diverse housing, adjudicated youth, impaired youth, EFNEP youth and teen parents. Agents reported that 945 adjudicated youth increased their knowledge, self esteem, social skills, increased school performance and decrease in discipline problems through participation in wilderness camps and other specially designed county programs. Through a variety of 4-H

programs, 3,448 youth residing in diverse housing gained better decision making skill, exhibited an increase in positive behavior and developed a positive attitude toward themselves. In addition to working with special needs populations, 1,364 youth enrolled in 90 4-H units increased their awareness, understanding and knowledge of youth with special needs through involvement in 4-H programs.

Environmental Stewardship

Environmental stewardship is a strong area of interest among 4-H'ers and volunteers. Agents from 30 counties reported 30,416 young people and 1,555 volunteers participated in environmental stewardship programs. County efforts in environmental stewardship range from environmental field days, recycling special interest programs, CATCH clinics to energy conservation. Buncombe County developed an innovative series of curricula centered around the Earth Angle character using dramatic arts to help youth and adults learn about recycling and environmental shopping. As an outgrowth of the program, a family retreat was conducted involving 19 families (54 people). In addition, train the trainer kits were provided for teachers and after school day care as an outcome of the workshop. In addition to county based programs, residential environmental educations programs were offered at 4-H Centers involving 4,596 students and 351 adults. In addition, programs for all county junior summer camps were designed to include a minimum of 6 hours of environmental education and involved 2,510 participants.

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 youth were involved in over 600,000 age appropriately designed educational experiences in 1993. Most learning experiences were between 3 and 6 hours in length and were taught by trained volunteers. Major categories of participation were:

Animal Science	156,112
Environmental Stewardship	120,369
Nutrition & Family Resources	60,618
Energy & Engineering	54,017
Government & Community Service	50,608
Health & Safety	47,622

The partnership of ES-USDA and the land grant universities in North Carolina has resulted in a significant outreach to all citizens, while projecting program and participation balance.

HIGHLIGHTS OF 3(D) AND SPECIAL FEDERALLY FUNDED PROGRAMS

Environmental Education

Over 70,000 individuals increased their awareness of public policy issues related to environmental action, and almost 20,000 increased their participation in public issues. Areas of interest included maintenance and improvement of water and air quality, solid waste management, forest and wildlife management, wetlands and endangered species. Practices designed to improve environmental quality were adopted by 482,000 people. These included adoption of agriculture and forestry best management practices; wellhead protection; and source reduction, composting and recycling to reduce solid waste going to the landfill. Almost 35,000 young people participated in environmental education programs with leadership from 1,555 volunteers.

Limited Resource/Low Income Individuals and Families

Lack of certain basic life skills reduced the potential of limited-resource individuals and families to become contributing members of society. Nine thousand two hundred twenty-three (9223) limited-resource individuals improved life skills by participating in Extension sponsored programs. One thousand nine hundred twenty-three (1923) limited-resource parents increased knowledge of child growth and development and six hundred forty-one (641) parents adopted effective parenting skills. Five hundred forty-six (546) of the 1638 participants in parent and youth programs reported improved communication which resulted in improved relations. Four thousand (4000) limited-resource adults reported improved problem solving skills and practiced for selected personal and community problems. Three thousand four hundred forty-eight (3448) youth residing in limited-resource communities (Public and Section VIII Housing) gained better decision-making skills, exhibited an increase in positive behavior, modified health practices, improved family communication skills and explored career choices. Approximately three hundred (300) small and limited-resource farmers improved their managerial skills by adopting a farm planning and recordkeeping system. One hundred fourteen (114) small and limited-resource farmers increased their awareness of at least one alternative enterprise that could generate additional income. Ninety-eight (98) small and limited-resource farmers improved their marketing plans that resulted in an additional \$125,000 in income. Twenty-four (24) "new", small, and part-time farmers in "Ways To Grow", a comprehensive, experiential, educational program on alternative agricultural enterprises, increased knowledge and skills on marketing, the decision-making process, financing and production technologies associated with production of alternative enterprises.

Conservation and Forestry Titles of 1990 Farm Bill

Almost 3,800 persons became more knowledgeable about the Conservation Title of the Bill. Nineteen thousand conservation practices were installed with Extension assistance. Practices included 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 and ponds. One thousand individuals became more knowledgeable about the Forestry Title of the Bill and installed 176 practices. A total of 4,712 acres was bid into the wetlands reserve program. One tract of 4,632 was rejected and the remaining three tracts are under review. Response to the program was less enthusiastic than expected.

Parenting and Family-Youth Programs

Trends from this year's report indicated an increase in court ordered parent education and financial counseling, more collaboration with agencies and family related groups, enhanced use of volunteers, increased resource development, more diverse participants, and more entrepreneur programs for individuals interested in starting home-based businesses. Agents are also teaching more classes for JOBS participants, foster parents and other social services clients. Extension agents are being recognized as experts with research-based information to meet the needs of parents and families.

Parents are still struggling to rear their children and to provide a comfortable environment for their family. Much work is still needed to deal with some social ills, such as teen pregnancy, child abuse and neglect, child care and family instability. Recurring themes and emerging program needs identified were: intergenerational needs of families, budgeting, self-esteem for both youth and adults, interpersonal relationships, and strategies to strengthen families. Agents reported a need for programs and resources to help families cope with the lack of jobs, low wages, poverty, stress, parenting, and work-related issues.

Agents and specialists increased resource development to support child and family programs (\$106,708). Financial support ranged from starting aging coalitions to establishing local model parent education and family education programs.

Interagency collaborations and volunteers helped to deliver coordinated and diverse programs to individuals and families. Innovative ways to reach more and diverse customers are current challenges for Extension.

Multi-Cultural Diversity

During FY1993, the North Carolina Cooperative Extension Service began a full implementation of its diversity plan. A team of eight people attended the National "Train the Trainer" Workshop. This group will provide the long term direction/support for diversity. The FY1993 Conference utilized the theme of "Strength in Diversity." During the conference, all state and county staff received diversity training. A team of consultants was employed to assist the Extension diversity team.

Future plans are to train a diversity team for each of the eight Extension districts. The district teams would train both county workers and Extension cooperators. The National Coalition model will probably be used in this training.

Volunteer Development and Management

Over 1,500 volunteers received training to be a county master or state master volunteer in 1992. With 73 volunteers reporting, the known outreach of the program to volunteer leaders and 4-H'ers was 2,715 people. Thirty-one counties have been involved in peer helper programs cooperatively with schools. There were 645 graduates of Home Economics master and other volunteer programs. Resource development funds received were \$158,945. The membership of Home Economics volunteer programs was 27,923. There were 16,814 NCEHA members participating in issue oriented programs. 601 partnerships, network and/or alliances with other agencies, groups, organizations, associations, etc. were established.

Expanded Food Nutrition Education Program

Nutrition Program Assistants worked with over 6000 adults and 5399 youth, assisted by over 1800 volunteers. Almost 3500 homemakers improved their diets to include at least one serving of foods from each food group. This represented a 37% increase. 1621 achieved recommended food servings in all food groups.

89% of homemakers who graduated from EFNEP increased their knowledge of nutrition and 78% increased their ability to manage food budgets and related resources (Food Stamps and WIC food packages).

Of 5399 4-H EFNEP youth who participated in programs to eat a variety of foods, 70% reported increased knowledge of the essentials of human nutrition. 64% improved their food selection and practices in food preparation and safety.

Special WIC/EFNEP Breastfeeding Project, Wake County

EFNEP coordinated with WIC (Women, Infants and Children Program) and Food Stamp agencies in all 37 EFNEP counties. 62% enrolled homemakers are WIC recipients, an increase of 281 from 1992. Food Stamp enrollment increased also; 3789 families (57%) received food stamps, an increase of 419 from 1992. 3854 participants (58%) were taught in group settings in 1993.

The breastfeeding project in Wake County is funded to continue in 1994. The breastfeeding support model will be tested in four additional counties in North Carolina as part of CES/WIC Nutrition Education Initiative.

Pesticide Applicator Training

Fourteen hundred commercial applicators, dealers and consultants were certified and 3,700 recertified. Five hundred twenty private applicators were certified and 9,248 recertified. In addition, approximately 5,000 homeowners received pesticide training. Worker protection and private applicator recordkeeping programs were developed and introduced.

Integrated Pest Management for Row Crops, Horticultural Crops and Livestock

Over 2,000 growers were involved in IPM training efforts and tours. Demonstrations were conducted in 21 counties on alfalfa, apples, Christmas trees, corn, cotton, Irish potatoes, peanuts, small grains, soybeans, tomatoes, beef, swine and poultry. Fifteen counties targeted increased uses of post emergence herbicides to avoid use of preplant incorporated and preemergence herbicides. As a result growers saved \$1.1 million and reduced herbicide use by 80 tons total active ingredient. Another state-wide program targeted increasing the number of non-pesticide pest control practices adopted by growers. Seventeen counties used this approach resulting in 1,500 growers initiating new practices on 175,000 acres. A survey of cotton growers showed that 98% use scouting and 60% use rotation as a means of controlling pests.

Pesticide Impact Assessment

Extension conducted a mail survey of 1,115 cotton growers in 18 North Carolina counties to determine pesticide use patterns. Data on the herbicides, insecticides, miticides, nematocides, fungicides, growth regulators, and non-chemical pest management practices used by cotton growers was used to respond to inquiries for pesticide use data from USDA's NAPIAP and other organizations. Pesticide use information was presented at the annual meetings of the Entomological Society of American and several North Carolina agribusiness and farm groups.

Farm Safety

Twelve hundred volunteers were recruited and trained in agricultural health and safety measures. Seven hundred agricultural and landscape managers adopted two or more safe pesticide handling practices and 380 adopted two or more power equipment safety measures. Almost 500 medical professionals increased their knowledge of agricultural safety and health. Nine hundred exhibits, screening and health fairs were held targeting health and safety needs of youth. Over 3200 families, adults and youth increased their knowledge of personal environmental health and safety practices. A Health and Safety Resource notebook and educational modules on Improving the Health and Safety of Swine Facility Workers and Poultry Workers were developed and placed in each county.

Small and Limited Resource Farmers

One hundred forty-one small farmers became aware of USDA services resulting in \$350,000 in benefits. Seventy-one small farmers improved their managerial skills by developing and adopting a farm record keeping system. Emphasis on alternative enterprises resulted in 809 farmers becoming familiar with at least one alternate enterprise that could generate additional income, 118 farmers adding new enterprises that resulted in \$531,000 in additional income and 135 farmers adopting improved marketing plans resulting in an additional \$283,000 income. One hundred fifty-eight minority farmers owning 30,000 acres became familiar with ways to retain their farm land.

Renewable Resources Extension Act

The application of improved forestry, wildlife and other natural resource management practices learned through Extension educational efforts resulted in landowner savings and increased revenues of \$3,822,000. Improved processing and utilization techniques resulted in savings of \$845,000 for producers and consumers of wood products. New land leases by forest landowners increased their income from wildlife and recreational leases by approximately \$446,000. Over 900 loggers harvesting 400,000 acres of timber a year received training on silvicultural implications of timber harvesting. Two hundred ninety-three elected and appointed state and local government officials increased their knowledge of forest management, wetlands, endangered species and/or air quality through participation in extension programs. Over 2300 contact hours were provided in forestry, wildlife and outdoor recreation training.