

Empowering People. Providing Solutions.



History of the North Carolina Cooperative Extension Service, 1995-2010
COLLEGE OF AGRICULTURE AND LIFE SCIENCES

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The mid-1990s were a period of rapid change for North Carolina — a time of globalization, rapid urban growth and quickly evolving communications technology.

Amid a globalizing economy, North Carolina's traditional big three (tobacco, textiles and furniture), which accounted for 22 percent of the economy in 1977, dropped to 7 percent by 2007. Farmers and government leaders looked to N.C. Cooperative Extension and N.C. State University's College of Agriculture and Life Sciences for alternative crops and enterprises to bring jobs to rural communities and to help farmers stay on their land.

One of the alternative enterprises that grew most rapidly during the 1990s was swine production. In 1988, North Carolina was home to 2.6 million hogs, and by 1997, there were 8 million. Along with the industry's growth came waste spills that raised concern over the environmental impact. Indeed, environmental issues were becoming more hotly contested than ever before.

At the same time, North Carolina's population was growing rapidly, with more and more green space being developed for housing and commerce. Census figures for North Carolina show that rural counties grew by 18 percent

while urban counties grew by 25 percent. Most of the growth was due to in-migration, and immigration of Hispanics was particularly pronounced: The state had the fastest-growing Hispanic population in the United States, at 394 percent, somewhat evenly divided among rural and urban communities. North Carolina was becoming increasingly diverse.

While the state grew, it also saw technological breakthroughs that opened new opportunities while creating new challenges. In particular, personal computers, the Internet and mobile phones were changing the economy, the way that North Carolinians got information and the way they preferred to communicate.

It was amid these and other changes that Dr. Jon F. Ort was named associate dean and director of the North Carolina Cooperative Extension Service in October 1995. Formerly CALS' assistant dean for administration, Ort succeeded Dr. Billy Caldwell, who served as interim director following the retirement of former director Dr. Robert Wells in December 1994. Ort retired in May 2010.

This document covers many of the changes and accomplishments that N.C. Cooperative Extension experienced during the time of Ort's leadership.

Extension provides educational programs on animal waste

In the 1980s and 1990s, North Carolina experienced a rapid rise to the top of the meat-producing states, particularly in poultry and swine production. With the rapid growth came rising concerns about the environmental impact, and N.C. State University's College of Agriculture and Life Sciences became increasingly involved in research and Extension work related to managing waste from swine and poultry operations.

By the 1980s, Extension specialists were doing research and demonstration work on a system for managing swine waste by applying it to cattle pasture land. And in the early 1990s, as the state legislature began considering swine waste regulations, N.C. Cooperative Extension conducted numerous workshops related to swine waste as a public issue, provided training programs for county commissioners and began working with community college agricultural teachers on instruction related to environmental issues in agriculture.

In the mid-1990s, College research and Extension professionals focused on developing data and models that would come to inform the General Assembly's development of regulations affecting animal waste management.

An animal waste operators' training program was developed and administered by the Water Pollution Control System Operators Certification Commission

in conjunction with Cooperative Extension and the N.C. Department of Environment, Health and Natural Resources. Extension agents with livestock responsibilities were encouraged to become certified waste operators so they would understand the requirements and thus be an educational resource for farmers. Extension administration, however, was deliberate in keeping agents out of the role of writing producers' animal waste management plans.

To help meet training needs, Extension also started a unique training center. The Land Application and Demonstration Center of the Soil and Water Environmental Technology Center was created in the late 1990s at the Lake Wheeler Road Field Laboratory in Raleigh. The facility includes full-scale irrigation systems and spreading equip-

ment used to demonstrate how land application systems should be properly managed to apply animal manure, residuals and treated wastewater while protecting the environment. The site has been used not only for courses for animal waste operators but also for courses and demonstrations for elementary, graduate and undergraduate students, municipal/industrial spray irrigation operators, professional soil scientists, nutrient management technical specialists and Extension agents.

During the early to mid-2000s, amid a moratorium on new swine operations, the emphasis of N.C. State University's animal waste management programs shifted to the development of alternative waste management systems, especially those that led to the creation of value-added materials and the creation of biofuels.



Extension specialists and researchers helped develop new methods of managing animal waste and provided educational training using facilities (such as the upflow biofiltration system pictured above) at the Lake Wheeler Road Field Laboratory.

Technology innovations improve communication

In the 1990s, the Internet brought about significant changes in Extension's work. The N.C. Cooperative Extension Service hired its first information technology director, Kevin Gamble, in 1992. In 1993, NCCE became the nation's first university extension service to launch a website (<http://www.ces.ncsu.edu>) and the second organization in the state to launch a server.

By 1996, Gamble and his IT coworkers had implemented a new network infrastructure to the research and extension centers in Plymouth and Mills River, as well as to Extension centers in all 100 counties and the Eastern Band of Cherokee Indians.

Including Internet-ready UNIX computer systems and leased telecommunications lines capable of carrying 56 kilobits (56K) per second, the network gave the centers unlimited access to the Internet, better access to computer software, the capability to host websites and a host of instantaneous communication tools. By the following year, all centers had a web presence.

In conjunction with the infrastructure upgrade, Extension reassigned five field faculty members to the role of area information management agents. This group — reduced to four positions by 2010 — expanded and improved the field faculty's use of technology. The group offered more than 400 formal learning opportunities each year and provided a large archive of online educational materials.

Extension's IT unit was reorganized several times from 1999 to 2002. In 1999, the Extension Technology Services group was merged with CALS Academic and Instructional Computing to become CALS-IT. In 2000, the group was split into Extension and Administrative Technology Services and CALS Academic Programs-IT. Ray Kimsey became director of Extension and Administrative Technology Services, serving through 2001.

In 2002, the group was again reorganized, becoming Extension Information Technology (EIT) and CALS Academic and Administrative Technology (CAAT). Rhonda Conlon succeeded Kimsey as EIT director in 2002. EIT was charged with supporting Extension's county center networks and desktop computers and with providing website support and application development for Extension programs.

The cost of maintaining the 56K leased lines and the availability of lower-cost and faster commercial service in most county center locations prompted a statewide network upgrade to commercial Internet service providers in 2003 through 2005.

In 2005, EIT upgraded the Extension website into a content management system (CMS) to provide a consistent look to all N.C. Cooperative Extension sites, to offer user-focused topic areas and to provide systemwide features such as an events calendar, publications database and image library. The CMS also gave county center personnel an interface that

made it easier for them to manage their websites.

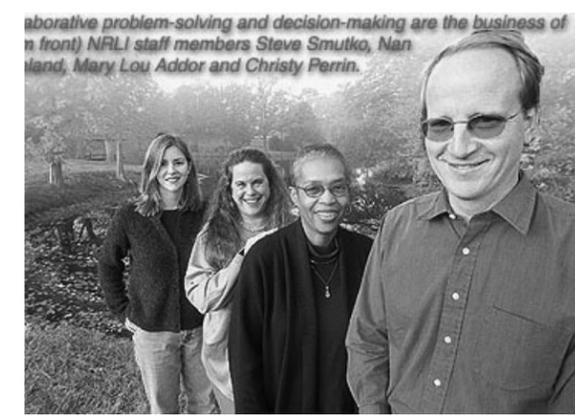
In 2007 EIT used Apple Macintosh systems to replace a Linux-based client-server computing system that had been installed in county center offices in 2001-02. The new systems provided more applications, modern multimedia capability and better compatibility with campus systems and mobile devices. To encourage adoption of the new system in all supported counties, administration negotiated a lease arrangement with Apple and implemented a plan for the county centers to gradually reimburse Extension Administration for a one-third share of the lease cost. Using Mac Minis as servers allowed for robust file backup and disaster recovery at a cost \$467,000 less than traditional business servers. This solution was well received in the participating county centers, and a new 3-year lease with Apple was established for new equipment for years 2010-2012.

In 2007, EIT led an effort to create a portal and suite of integrated applications to allow each employee and county center to develop plans and report outcomes aligned with Extension's statewide strategic priorities, goals and objectives. This "One Stop Shop" eliminated employees' need to duplicate efforts to report their successes and impacts on individual, team and integrated activities; helped align local efforts with those of the organization as a whole; and enabled county centers and their staff to develop annual plans tied to the organization's strategic priorities.

Institute supports conflict resolution in environmental issues

During the 1990s and 2000s, North Carolina faced tremendous growth and development pressures in some of its most environmentally sensitive areas. The state's economy depended heavily upon the quality of its natural resources and environment, yet people often disagreed over how North Carolina's land, air and water resources should be used and managed. Increasingly, disputes arose over natural resource and environmental issues such as endangered species, private property rights, wetlands, forest management, and air and water quality.

In 1994, responding to the need to foster leadership in the natural resource arena and avoid policy gridlock, Cooperative Extension faculty at North Carolina State University, the University of Kentucky, and the University of Arkansas received funding of \$700,000 from the W.K. Kellogg Foundation to develop natural resources leadership programs. The overall goal of the 3-year project was to improve the management of natural resources in the South and to enhance rural economic development while maintaining or improving environmental quality. The strategy was to bring together natural resource managers from the public and private sectors, business and industry, educators, and representatives of environmental and community groups in an environment designed to allow them to explore controversial issues and develop the leadership skills required for



Collaborative problem-solving and decision-making are the business of the front) NRLI staff members Steve Smutko, Nan Freeland, Mary Lou Addor and Christy Perrin.

Early NRLI staff members: Christy Perrin, Mary Lou Addor, Nan Freeland and Steve Smutko.

resolving issues and designing mutually satisfactory management policies.

In 1995, the first Natural Resources Leadership Institute (NRLI) launched in North Carolina and was adapted for use in 1996 by Arkansas and Kentucky. Leadership institutes were also established in Florida, Virginia and Maryland, with each program receiving seed funding from the W.K. Kellogg grant. Subsequent NRLIs were launched in Washington and Indiana, while other NRLI spin-offs took root in Alaska, Kansas and Montana.

N.C.'s NRLI held annual 18-month institutes, providing leadership development to about 25 professionals in state, federal and local government, business and industry, nonprofit environmental organizations and higher education. By 2010, more than 400 natural resource professionals had participated in the institute. In 1999, former NRLI fellows established the Natural Resources Leadership Association as a way to provide continued professional

development and fellowship in collaborative decision-making.

Beyond leadership development, NRLI added an environmental decision-making program in 1996 to help resolve environmental conflicts. Its first effort in this arena involved working with the U.S. Forest Service to mediate a dispute among timber interests, environmental organizations and community members over a proposed timber sale on Bluff Mountain in Madison County, N.C. Between 1996 and 2010, NRLI facilitated more than 40 environmental decision-making projects throughout the state and beyond.

The founding Extension faculty of the Natural Resources Leadership Institute included Dr. Mike Levi (project leader), with Dr. Leon Danielson, Dr. Ed Jones, Dr. Si Garber and Dr. Steve Smutko, who served as the institute's first director from 1995 to 2009. Mary Lou Addor served as NRLI's associate director from 1997 to 2009 and in 2010 assumed interim leadership for the institute.

Neuse team takes basinwide approach to water-quality education

In the mid-1990s, Cooperative Extension launched its groundbreaking Neuse Education Team. Created as part 1996 legislation that focused on improving water quality in the Neuse River Basin, the team helps connect farmers, business owners, municipal and county officials, homeowners and young people with information and technology to reduce pollution.

Including campus specialists and area environmental agents, the team had a significant impact in the basin through its work with those having a vested interest in water quality:

Farmers The state General Assembly passed regulations that mandated a 30 percent reduction in nitrogen from all sources by 2003. Because the state Divi-

sion of Water Quality estimated that agricultural land use in the Neuse basin contributed more than half of the total nitrogen load to the estuary, farmers were responsible for implementing best management practices to reduce nitrogen losses by more than 1 million pounds annually.

The team trained agents who reached 1,240 farmers and turf managers with information on reducing nutrients in the environment; helped develop a nitrogen loss estimation worksheet; trained 1,000 growers in poultry litter management; and provided 1,100 operators of animal waste management systems with a record-keeping workshop and record book.

Through the Neuse Crop Management Project, the team worked with partners to write nutrient management plans for 105,000 acres, achieving a 23 percent reduction in fertilizer nitrogen amounts applied per acre of cropland and a greater than 40 percent reduction in soil-applied pre-emergence herbicides. Cost-benefit analyses on best management practices and nutrient management found that farmers could save \$20 to \$40 per acre while helping the environment.

Homeowners The Neuse Team helps homeowners become part of the solution to water-quality problems in a fast-growing state. The team has taught workshops related to environmentally friendly landscaping, septic sys-

tems, and backyard stormwater best management practices; trained Master Gardener volunteers to handle calls related to residential environmental issues; installed rain gardens and rain barrels to demonstrate their use; and distributed thousands of septic system guides and DVDs.

Developers and engineers Since 2007, more than 100 engineers and other workshop participants have said they have used Extension design guidance in the construction of stormwater best management practices such as bioretention areas, wetlands, green roofs, permeable parking lots, swales and level spreaders.

City, county and state officials The Neuse Education Team has worked with county and city officials to install a water-harvesting system in New Bern, to set up residential stormwater education centers in Wake County parks, and to help state policy makers understand the results of applied field research so they can be considered in the state's design standards for stormwater practices.

Youth and families To emphasize personal responsibility and the role of knowledge and science in protecting water quality, the Neuse Team has placed a high priority on educating children, teens and young adults through school- and community-based water-quality demonstration projects and environmental field days, exhibits at area museums, 4-H Stream Watch Clubs and more.

North Carolina becomes national model for land-grant diversity

As North Carolina's population grew more ethnically diverse in the 1990s, so did Cooperative Extension's commitment to serving diverse audiences and to fostering diversity in its faculty and staff.

In 1999, North Carolina was named one of eight Change Agent States for Diversity through a national Extension initiative application and selection process. More states joined as the initiative progressed. The CASD project involves a consortium of land-grant universities committed to developing successful models

and change strategies to support greater diversity and welcoming climates throughout the land-grant system. In North Carolina, a Diversity Catalyst Team with members from both N.C. State University and N.C. A&T State University guides the state's efforts.

In part because of the CASD initiative, the College of Agriculture and Life Sciences started offering its faculty and staff diversity training that became a model for diversity training at land-grant universities nationwide.

Called Opening Doors, the 3-day overnight retreat — now offered two times per year — focuses on raising participants' awareness of diversity and on enhancing their ability to create organizations that welcome people of all backgrounds.

Also in 2005, N.C. Extension's leadership role in helping broaden cultural diversity in the land-grant university system was evident as 200 Extension professionals from across the United States gathered in Greensboro for the National Diversity Conference.



CALS offered university employees — including those with Extension — the opportunity to participate in the three-day overnight Opening Doors diversity retreat.



A creek tour group learns about best management practices for drainage.

4-H and family and consumer sciences add facilities, programs

N.C. Cooperative Extension's 4-H youth development and family and consumer sciences programs experienced significant milestones from 1995 to 2010, including the renaming in 1995 of the department then called Home Economics to Family and Consumer Sciences, the merger of the 4-H and FCS department in 2006 and the centennial of 4-H in 2009. Here are a few of the highlights:

- N.C. Cooperative Extension continued to be a leader in education for the **Supplemental Nutrition Assistance Program**, or SNAP-Ed, which was formerly known as food stamp nutrition education. Between 1995 and 2010, federal support reached well more than \$10 million. Current SNAP-Ed programs are designed to help people put into practice nutrition and physical

activity behaviors that are consistent with a healthy weight. These programs include outreach to the elderly through congregate nutrition sites, in-school nutrition education for third-grade students, in-classroom nutrition and physical activity education for preschool children, and food preparation classes for high-school students.

- In 2001, Cooperative Extension celebrated the dedication of the **Eastern 4-H Environmental Education Center** in Tyrrell County. Built with the support of a state appropriation, as well as gifts from corporations, foundations and individuals from across the state, the state-of-the-art camping center covers more than 250 acres on the Albemarle Sound.

- Through a partnership with N.C. State University's Depart-

ment of Curriculum and Instruction, the 4-H department developed the **Youth Development Leadership series** of five graduate-level courses. The series was the first graduate education specialization available at N.C. State targeted specifically for 4-H youth development professionals and others in youth-serving organizations.

In 2005, the Department of Family and Consumer Sciences started a graduate education program in conjunction with the University of North Carolina-Greensboro. The joint degree focused on students interested in pursuing **graduate education in human development and family studies**.

In 2009, efforts were started to merge the graduate specialization in youth development with the human development/family studies programs. In the spring of 2010, a new, stand-alone departmental graduate education program entitled **Family Youth Development (FYD)** was approved by the University of North Carolina's general administration.

- In March 2006 College of Agriculture and Life Sciences Dean Johnny C. Wynne and State Extension Director Jon F. Ort announced the **merger of the Department of 4-H Youth Development and the Department of Family and Consumer Sciences**. The merger unified the youth and family programs of the N.C. Cooperative Extension Ser-

vice with one department head, state program leader and NCCES associate director. The arrangement led to greater opportunities for integrated programming, fund raising, external partnerships and academic program growth. Now in its fourth year, the merger is recognized as a national model of excellence.

- In 2007, the N.C. General Assembly appropriated \$7.5 million for **improvements at 4-H camps and centers**. And the following year, the legislature set aside an additional \$4 million. This \$11.5 million is part of a \$34.5 million plan for 4-H camp renovations.

- 2009 marked **N.C. 4-H's centennial**. 4-H held a 3-year celebratory campaign, from 2008 to 2010, called "We are 4-H." Field faculty, volunteers, 4-H'ers and alumni in all of the state's 100 counties took part.

- Planning is under way for the **Family and Consumer Sciences Program's centennial** celebration. FCS in North Carolina began with the hiring of Jane S. McKimmon in November of 1911. Its roots include food, nutrition, child development, family resource management and housing, areas that continue to be important to families in North Carolina and beyond. Today's FCS program addresses such contemporary issues as overweight and obesity, debt management, energy conservation and family development.



Cooperative Extension has worked in partnership with other state organizations to promote healthy eating and physical activity to reduce overweight and obesity.



4-H'ers celebrate the dedication of the Eastern 4-H Center in 2001.

Extension expands foundations to secure private funding

During the 1990s and 2000s, N.C. Cooperative Extension experienced periods of financial stress. Costs of doing business were rising, but funds from county, state and federal governments were not keeping up. To help fill in the gap, Extension focused on charging some fees for services as well as securing money and other gifts from private donors. By 2009, annual private gifts and pledges had reached nearly \$20 million.

Efforts to secure private gifts for Extension ramped up in 1996, when the College's primary foundation, the N.C. Agricultural Foundation Inc., established the N.C. Cooperative Extension Service Foundation. The N.C. 4-H Development Fund, in existence since 1960, merged with the agricultural foundation in 1999. The coming years saw several significant developments: creation of a foundation for land gifts, two programs to raise funds for county and district extension programs, campaigns for 4-H's centennial and for a new 4-H museum, and a family and consumer sciences foundation. Also, planning began for an agricultural and natural resources foundation.

The Extension foundation's early days When the Extension foundation was launched, it was the first of its kind in the nation and became a model for other state extension services looking to expand their private funding. State Extension Director Jon Ort and Dr. Carlton Blalock, state

Extension director emeritus and the foundation's first president, provided early leadership. Joining them were 27 board directors and Al Stanford, the foundation's first executive director and a former county Extension director.

With leadership from board president Billy Caldwell and foundation executive director David Hays, the agricultural foundation began a program to give individuals and organizations an opportunity to donate property to the College. The land could be left in farmland, set aside through a conservation easement to protect the property in perpetuity or sold to generate funds for programmatic or personnel endowments.

One example is the \$3.6 million gift of two lots at Sunset Beach from Edward and Dinah Gore: The lots were sold and the proceeds used to support eight different endowments for Cooperative Extension's Brunswick County Center, the NCCES Foundation, a scholarship named for Edward Gore and a 4-H-Family and Consumer Sciences Foods and Nutrition Endowment named for Dinah Gore.

In 2004, David Hays became executive director of the new Landscapes of Opportunity program, and Sharon Runion Rowland assumed leadership for the Cooperative Extension Service Advancement Team and became executive director of its foundation. Serving as foundation presidents were Carroll

McLawhorn, Greenville; Willie Pennington, Raleigh; and Stan Biconish, Fuquay-Varina. Under their leadership, the Campaign for Counties program was born.

Campaign for Counties The campaign, launched in 2007, was designed to help county centers secure and manage private resources for local, multi-county and district programs. As of July 1, 2010, 335 enhancement funds or endowments had been established within one of the Extension foundations to support local programs. Ninety-eight county centers have private funds to support agriculture, natural resources, family and consumer science, EFNEP, the Extension and Community Association, 4-H Youth Development and staff development.

Regional directors of development provided leadership for the campaign. All were retirees who had been successful at county or district fund raising.

Partnering for Progress Efforts to expand private support for county Extension centers continues through a new program called "Partnering for Progress." Adopted by the State Cooperative Extension Advisory Council in spring 2010, the program links the regional Extension directors and Extension's State Advisory Council members with county Extension advisory boards. The goal is to supplement the contributions of county government, the state legislature and the U.S.

Department of Agriculture with untapped resources from individuals, businesses and foundations.

N.C. 4-H Development Fund

Since 1999, when the 4-H Development Fund merged with the Agricultural Foundation, Sharon Runion Rowland, Jackie Helton and Dr. Michael Martin have served as executive directors. In 2009, the 4-H foundation launched the Campaign for the Clover to provide funding for the second 100 years of N.C. 4-H. Larry Wooten, N.C. Farm Bureau Federation president, and Martin Lancaster, former Congressman and president of North Carolina's community college system, serve as co-chairs.

Brad Dixon and a committee chaired by N.C. State English professor and 4-H historian Dr. Jim Clark lead an effort to raise \$4.5 million for a 4-H Museum and History Center.

Family and Consumer Sciences Foundation

In 2005, Cooperative Extension created the country's first family and consumer sciences foundation.

The first president was Frances Voliva, retired Tyrrell County Extension director. Maurene Richards, retired Forsyth County Extension director, served as the part-time executive director.

During its first five years, the foundation received more than \$1.7 million, including an \$800,000 grant from the State Health Plan and an endowment

honoring Dinah Gore. Mozelle Parker, longtime Extension and Community Association volunteer and co-chair of the College's capital campaign, established a charitable trust to support a family and consumer sciences agent position in Scotland County.

ECA Foundation The N.C. Extension and Community Association Foundation was launched in April 2010 with a 30-member board of directors. Sylvia Churchwell of Lee County is the first president. The foundation will help local, county, district and state Extension and Community Associations manage private resources.

Agricultural and Natural Resources Programs Committee The Extension Foundation set up a committee to explore opportunities for agricultural and natural

resources programs. Several counties have established named or county endowments and enhancement funds within the foundation. And the N.C. Association of County Agricultural Agents has set up endowments to support programmatic efforts and to provide scholarships to members' children or grandchildren.

In addition, county Master Gardener volunteer groups have created endowments and enhancement funds to help with arboreta, teaching gardens, garden tours and other local initiatives.

Also, county and district livestock shows and sales have begun to set up accounts within the foundation to support these shows, educational scholarships and related programs.



N.C. State University Chancellor Randy Woodson meets 4-H'ers at a fund-raising event.

New staff development system launched

Training and development for Extension faculty and staff was a focus of internal study during the late 1990s. In August 1998 North Carolina Cooperative Extension established a blue-ribbon commission to address a more strategic systematic training and development philosophy and practice.

Dr. Jon Ort, director of the North Carolina Cooperative Extension Service at N.C. State University, and Dr. Dalton McAfee, associate Extension administrator at N.C. A&T State University, charged the 21-member committee to study the existing staff development program and develop a plan for a new training and development system to meet the needs of all Extension workers, both paid staff and volunteers.

The committee proposed a competency-based personal and organizational development plan, and 35 members were added to the committee to help validate and develop seven core competencies to be used in training, hiring and rewarding county Extension directors, agents, volunteers, program assistants and secretaries. These core competencies were knowledge of the organization, programming, human relations, communications, professionalism, technical knowledge and leadership. The blue-ribbon committee also recommended creating a new unit charged with leading and



Personal and Organizational Development was created in October 2000, at the recommendation of a blue ribbon commission. Among its initiatives: an institute designed for aspiring county Extension directors, including this class of 2010.

managing personal and organizational development.

In October 2000, Dr. Richard Liles was named director of the unit, known as Personal and Organizational Development, or POD. The unit was charged with deploying an inclusive, convenient, lean, competency-based system.

Goals included designing an online learning management system, creating various levels of core competency curricula, re-vamping orientation programs, designing county Extension director leadership institutes and revising State Extension Conference.

POD quickly became one of the nation's leading extension staff development units.

More than 15 state extension services adopted POD's redesigned orientation system, and its online learning management system is considered state of the art.

The unit also became involved in several initiatives beyond Cooperative Extension, including a national recognized agricultural leadership program, a nationally recognized natural resource leadership program, a new leadership program for directors and presidents of commodity groups and a national food systems leadership institute.

Institute established to address health and safety on the farm

Recognizing that agriculture is one of the most dangerous occupations, N.C. Cooperative Extension at N.C. State University entered into a partnership with East Carolina University and N.C. A&T State University in 1999 to establish the Agromedicine Institute.

The institute, with headquarters at ECU, promotes the health and safety of agricultural, forestry and fishery workers, their families and their communities through research, intervention, outreach, education and training.

According to the institute, machine-related injuries are the leading occupational cause

of death for N.C. agricultural workers. They commonly suffer from muscular and skeletal injuries, accidental chemical exposures, sun- and heat-related illness and injury, and animal-transmitted diseases.

Agricultural families also are more likely to lack health insurance than other North Carolinians and have limited access to affordable health care, especially health care that takes into account the occupational risks they experience and the demands agriculture places on their time and resources.

The institute's goal is to reduce injury and illness by conducting

research that leads to practical solutions and by developing effective educational approaches.

In carrying out its mission, the Agromedicine Institute collaborates with the agricultural community, businesses, health care organizations, government agencies and nongovernmental organizations.

Dr. Greg Cope, Extension leader in the Department of Environmental and Molecular Toxicology, has coordinated N.C. State University's agromedicine programs from 1999 to the present, with the help of agromedicine information specialist Julia Storm.



An Agromedicine Institute-sponsored farm safety workshop included exhibits and lectures.

Major hurricane leads to changing Extension role in disasters

N.C. Cooperative Extension long had a mandated role in determining crop damage assessment following major natural disasters, and it also assisted with nuclear exercises related to the nuclear power plants in or near North Carolina. However, Hurricane Floyd, which made landfall in the fall of 1999, changed Extension's role and responsibilities related to natural disasters.

Following Floyd, floodwaters inundated thousands of N.C. homes. Also, more than 30,000 swine and 2 million poultry carcasses had to be disposed of because of flooding on farms. Due to public health concerns, these dead animals needed to be gotten rid of safely and expeditiously.

Extension agents were mobilized as on-the-ground experts working with producers and professionals from other state and federal agencies to dispose of these animals. Meanwhile, Extension professionals working at the state level established the organization's ability to respond and address this critical issue.

The disaster also established the importance of local, nonregulatory personnel in addressing issues related to recovery. Extension personnel helped victims with such issues as food safety, personal finances, water safety, home safety and renovation, crop recovery and agricultural loss insurance. Extension came to be seen as an important partner in the preparation, response and



One of the worst hurricanes to hit the United States, Floyd submerged homes, farms and other businesses for days.

recovery of disasters. And it was a key partner in the Governor's Hurricane Recovery Task Force.

Following Floyd, Extension became a founding partner in the State Animal Response Team, or SART. The partnership was the first of its kind in the United States, and the possibility of a domestic foot-and-mouth disease outbreak and the potential of bovine spongiform encephalopathy expedited the adoption of SART's tenants by other states and the federal government.

North Carolina also became a leader in the national Extension Disaster Education Network. Established following the floods in the Midwest in 1993, EDEN became a significant partner in addressing the challenges of hurricanes Katrina and Rita.

Later, when hurricanes had a major impact on western North

Carolina, the state needed facilities and personnel to administer state-funded disaster recovery funds for housing, private bridges and agriculture. Fifty county Extension centers and their field faculty were volunteered for this purpose.

The success of this initiative resulted in a memorandum of understanding with the N.C. Division of Emergency Management. It stated that following a major disaster, county Extension centers that are sufficiently equipped will serve as disaster recovery centers, providing facilities and personnel that are trusted by local residents to help access assistance and information to expedite recovery.

Cooperative Extension continues to seek opportunities to provide education and other help to the state's people before, during and after natural and human-caused disasters.

2000s bring changes in status of county Extension employees

The 2000s brought changes in the status of county Extension employees — agents and secretaries as well as program assistants, associates and technicians.

Cooperative Extension's primary mission is education, and Extension agents are first and foremost educators. But historically, they were not officially designated as N.C. State University faculty members. That meant that county Extension agents were not eligible for state government pay raises designated for teachers and university faculty members. And they were not eligible to participate in optional retirement programs — programs that were available not only to university faculty members but to Extension agents working in all states sur-

rounding North Carolina.

In 1996, Cooperative Extension administration began working with college, university and University of North Carolina system leadership to have Extension agents designated as university field faculty members. However, because it involved changing university policy as well as higher-level approvals, it took until 2002 for the field faculty status to be granted and optional retirement plan sign ups to begin.

In 2005, the state legislature made \$3.7 million available for salary increases mainly for Extension field and on-campus faculty who had been excluded from previous legislative increases granted to academic faculty.

Changes also took place in the way county Extension secretarial positions were administered. Since the early 1970s, these positions were managed by Cooperative Extension administration, outside the Office of State Personnel's authority.

However, because there were no official rules or actions that legally documented the exemption, Extension administration worked with the College of Agriculture and Life Sciences' personnel office and the university's legal affairs office to develop a statute that passed the General Assembly in 2008. That statute placed these positions under the authority of the university's Board of Trustees. The trustees then designated Extension administration as the lead agency for administering the positions.

That year, the N.C. Department of Labor determined that program assistants, associates and technicians at N.C. A&T State University did not meet the criteria to be classified as exempt from the state personnel act (EPA) but rather needed to be subject to the act (SPA).

CALS Personnel and Extension administration then worked to integrate the program assistants, associates and technicians into the so-called county operations support staff designation that applied to county extension secretaries. Working with the university's legal affairs office, extension drafted new rules and policies for all of these employees.



Extension agents are, foremost, educators, and policy and legislative changes made in the 2000s gave them field faculty status.

Pilot project initiative extends Cooperative Extension's scope

In the wake of the work of the Kellogg Commission on the Future of Land-Grant Universities, N.C. State University, under Chancellor Marye Anne Fox, established a new vice chancellor position to elevate the university's extension mission. Dr. Stephen B. Jones became the first university vice chancellor for extension, engagement and economic development in 2001.

Having been director of the Alabama Cooperative Extension Service, Jones was familiar with Cooperative Extension's work. He immediately began to encourage the organization to consider new ways it could bring the knowledge and resources of the entire university to bear on high on high-priority local problems outside Cooperative Extension's traditional areas of agriculture, natural resources, community and rural development, family and consumer sciences and 4-H youth development.

As a result, the Office of Extension, Engagement and Economic Development began working with Cooperative Extension to launch the Gateway Counties project in 2002.

The project began with a series of get-acquainted meetings between administrators from several university units and Extension directors in 12 counties — Cumberland, Currituck, Dare, Lenoir, Martin and Pamlico in the east to Forsyth, Gaston, Mecklenburg



A Haywood County workshop focused on inquiry-based science learning in elementary and middle school classes.

and Wake in the Piedmont to Transylvania and Haywood in the mountains. In March 2003, Chancellor Fox made the first public announcement of the project with a ribbon-cutting in Gaston County. David Stein, a faculty member in the College of Design, and Dr. Wanda Sykes, Cooperative Extension's Southeast District director, guided the effort in conjunction with Extension directors in the participating counties.

Gateway Counties projects were wide-ranging: In Haywood County, an agent with the College of Engineering's Industrial Extension Service was given an office in the county's Cooperative Extension center, and the University's Science House program worked with local school teachers to introduce inquiry-based

science learning into elementary and middle school classes. In Forsyth, Cooperative Extension sought the help of the College of Natural Resources to develop a feasibility study and long-range plan for the arboretum at Tanglewood Park, a 1,100-acre county property. And in Lenoir County, where the economy had been devastated by flooding following 1999's Hurricane Floyd, Extension worked with the College of Design and local leaders to boost historical and recreational tourism to the county's many Civil War battlefields and to the areas the county had acquired along the Neuse River.

The pilot program is credited with long-term, positive economic and social impact in the counties that were involved.

Cooperative Extension positions itself to meet changing needs

On the cusp of a new millennium, higher education leaders nationwide began calling for change at land-grant universities because of profound changes taking place in the economy, the population and information and communications technology.

"Returning to our Roots: The Engaged Institution," issued by a group of university chancellors and presidents known as the Kellogg Commission on the Future of Land-Grant Universities, called for land-grants to engage more deeply with people and communities to solve problems and improve the quality of life.

In 2003, North Carolina Cooperative Extension's administration at N.C. State University and N.C. A&T State University launched a change management and marketing initiative designed to make sure that Extension was positioned to meet the changing educational needs of the state's people and recognized as an essential and valued partner for progress.

Cooperative Extension hired Carolina Public Relations and Marketing to guide early stages of the initiative, including conducting market research and analyzing strengths, problems, opportunities and threats. Extension administration appointed a 50-member Guiding Coalition, representing a cross-section of the organization, to take a hard look at market realities and perceptions of key Extension partners.

Internally, more than 100 faculty and staff members from both institutions were involved in action teams that made recommendations in five areas: planning and prioritization, programs, people, performance measurement and public image. A smaller Core Team developed final recommendations, emphasizing the theme "One Mission, One Vision, One Extension," calling for Extension professionals to work across disciplines and organizational boundaries to create and deliver programs that bring about lasting and profound solutions to high-priority problems affecting the state's communities and people.

As a result, Cooperative Extension hired specialists in the areas of Extension programming, evaluation and marketing. In 2007, with these professionals on board and after a comprehensive statewide training effort on programming and evaluation, Extension conducted a comprehensive needs assessment by involving 22,000 North Carolinians in focus groups, in surveys and by other means.

During this process, county faculty, with the support and participation of campus faculty, determined the priority needs and trends at the county, regional and state levels. Extension then formed long-range plan goals in the following areas:

- Environmental Stewardship and Natural Resources Management

- Sustainable, Profitable and Safe Plant, Animal and Food Systems

- Youth and Adults Educational Success Achievement

- Healthy Weight and Chronic Disease Prevention

- Life Skills and Parenting

- Energy Conservation and Alternatives

- Workforce and Economic Development

- Community, Leader and Volunteer Development

- Emergency and Disaster Preparedness

In 2008, Employees developed a Web-based tool known as the "One-Stop Shop" to help align planning and prioritization processes with programming, reporting and performance management.

At about the same time, Extension professionals statewide received a toolkit designed to help them market Extension and its accomplishments.

The toolkit included a logo that continued to emphasize the joint nature of Cooperative Extension work at N.C. State and N.C. A&T University and that carried a new tagline, "Empowering people. Providing solutions."

Promotional materials focused on the difference Extension makes in the lives, land and people of North Carolina.

Spanish-language programs address needs of fast-growing audience

During the 1990s, North Carolina experienced one of the fastest-growing Latino populations in the country, with immigration from Central and South America increasing by close to 400 percent from 1990 to 2000. Most of these new North Carolinians came from poor, rural areas in Mexico to pursue better economic opportunities. Recognizing the trend, Extension specialists and agents began working to address their needs.

Early efforts included Spanish-language publications and videos related to farm safety, food safety and disaster recovery. Later came health fairs targeted to the Latino community, nutrition education classes and community programs to reduce the high school dropout rates of Spanish-speaking children.

In 2004, efforts began to become more organized. A group of Extension agents and specialists attended a conference in Puerto Rico on the topic of extension education programming for the Latino community, and the following year the group delivered training sessions on reaching Hispanic/Latino audiences at Extension's Annual Conference.

Efforts to reach the Latino audience began to pick up steam in 2005. Dr. Andrew Benhke was appointed human development specialist, focusing on statewide Latino family programs. Around the same time, Southeast District Director Dr. Wanda Sykes ap-



Some of Extension's early work with the Latino community focused on farmworker safety.

pointed several county directors to a district Latino council, which became a model later for Latino task forces in all of Extension's districts.

In 2006 a group of Extension professionals began in a year-long training on Latino culture that culminated in a week-long visit to Mexico City and Oaxaca, Mexico, in partnership with the University of North Carolina's Center for International Understanding.

Upon returning, the group — known as the N.C. Latino Outreach Team, or NC LOT — recommended that Extension administration develop a more coordinated, statewide approach.

To guide the effort, administration appointed Cintia Aguilar as Latino affairs facilitator for the Department of 4-H Youth Development and Family and Consumer Sciences in 2007. Her early efforts focused on building Extension's capacity to serve the Latino community in North Carolina and on strengthening partnerships with other agencies that also serve the community.

These partners included the state's departments of labor, agriculture and health and human services, as well as non-profit Latino organizations.

Cooperative Extension established in 2008 a Latino Advisory Council including two representatives from each of Extension's district Latino advisory councils, plus campus and external partners. The council, or CELAC, set several priorities for Extension's work with Latino audiences: designing and implementing Extension programs addressing Latino/Hispanic cultural issues; building alliances with local communities and establishing organizations to enhance partnerships between NCCE and Latino audiences; and marketing Extension to state and local Latino/Hispanic groups.

By 2010, Extension had developed a Spanish-language resource guide and DVD for North Carolina newcomers, as well as materials on topics as varied as family finance, domestic violence prevention, conservation, dropout prevention and pesticide safety.

Value-added and alternative agriculture are focus of new effort

Early in the new millennium, North Carolina's agriculture and agribusiness underwent significant changes. In 2004, the U.S. President signed legislation ending the Depression-era tobacco quota system. At the same time, consumer preferences were changing. In response, College of Agriculture and Life Sciences faculty members encouraged farmers to think about new, value-added and alternative crops and enterprises.

One of them, Extension economist Dr. Blake Brown, a tobacco specialist, established the College's Program for Value-Added and Alternative Agriculture in 2006 to help farm families make informed decisions when evaluating the profitability of new farms and enterprises. The program was started with funds from the N.C. Tobacco Trust Fund Commission, which was created with some of the money that came to North Carolina as part of an agreement between attorneys general from 46 states and four of the nation's largest cigarette manufacturers.

As the Program for Value-Added and Alternative Agriculture was being developed, so was a so-called "biopolis" in Kannapolis. David Murdock, the billionaire owner of Dole Foods and other businesses, worked with the state university system and others to establish the N.C. Research Campus on the site of a former textile mill. Ground was broken

in February 2006 for the first campus facility, and by May 2007, N.C. State University established a temporary presence in storefront offices in Cannon Village, near the Research Campus site.

Then in November, the alternative agriculture program relocated to the Research Campus and three new team members were hired in horticulture, fresh produce safety and communications. Also, an existing business management system was redefined to focus on farm management for specialty crops and to complement work in the Department of Agricultural and Resource Economics.

Meanwhile, the University hired Dr. Mary Ann Lila from the University of Illinois at Champaign-Urbana to direct what is now known as the Plants for Human Health Institute. Her appointment was effective Aug. 1, 2008. In October, the buildings that would house the Plants for Human Health Institute and the Program for Value-Added and Alternative Agriculture were dedicated.

In 2009 former N.C. State University Chancellor and CALS Dean James L. Oblinger was assigned to the campus to work with both the program and the Plants for Human Health Institute.

Later that year, the value-added program was renamed N.C. MarketReady to more accurately communicate the fact that it

focused on all aspects of agricultural enterprises, from research and business planning to production, management, food safety and marketing.

Around the same time, Rod Gurganus, an Extension associate for entrepreneurial horticulture, assumed team leadership. Brown had stepped down because of increased responsibilities in addressing U.S. Food and Drug Administration's regulation of tobacco, which was expected to have a dramatic effect on North Carolina.

By 2010, the MarketReady team had grown to five faculty and four staff members and worked closely with research colleagues in the Plants for Human Health Institute, as well as with faculty from main campus and Cooperative Extension field faculty across the state. The team focuses on agricultural enterprise development, business skills education, fresh produce safety, horticultural skills education and strengthening markets.

From its early days, the team was highly successful in securing grants, receiving more than \$2 million in grants to carry out its mission. Among its early accomplishments: web-based growers' information portals, fresh produce safety materials, business development files, The Produce Lady videos and value-added cost share applications and guidelines.

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