More than 700 people turned out September 16 to enjoy the first-ever Fall Festival at the Center for Environmental Farming Systems in Goldsboro. The festival, an open house event for the public, was the culmination of *Seasons of Sustainable Agriculture*, a celebration of 10 years of programming at CEFS.

The event was held at the CEFS Small Farm Unit, an organic farm where crops, poultry and goats are raised. Visitors could see a variety of crops and animals in the fields, including Sudan grass for grazing goats, pasture-raised poultry, a fall garden, cover crops, a no-till demonstration and a sorghum crop maze.

"We were extremely pleased with the turnout and response to this first-time event," said Nancy Creamer, CEFS director. "More than 700 were in attendance, and everyone seemed to have a good time.

"We had a lot of kid activities in addition to farmer and gardener workshops, a farmers market, music, local food and more. I expect this will likely become an annual event!"

The festival featured live music, including that of The Back Porch Boys, a three-member band of players with ties to CEFS. At the farmers' market, local vendors sold a range of products from produce to goat cheese to honey.

Throughout the day, visitors participated in tours of the Small Farm or of all the CEFS units, as well as workshops. Workshop topics included vermicomposting, tomato grafting, alpaca breeding, raising pastured poultry, eating local foods and more.

Children enjoyed a variety of activities, including getting lost – and found – in the crop maze, creating art with seeds and harvesting, shucking and milling corn. Face painting and other art activities were also offered.

Local food vendors served up barbecue sandwiches, ice cream and a variety of fried vegetables. Wayne County 4-H'ers made fresh orange-ades. A variety of exhibitors also offered information on CEFS and sustainable agriculture.

Article by Natalie Hampton, NCSU Agricultural Communications

Photos by Rebecca Kirkland, NCSU Agricultural Communications

This article originally appeared in Extension Online News, a publication of the North Carolina Cooperative Extension Service.

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From the Director

As the field season and the Seasons of Sustainable Agriculture wind down, it’s time to reflect on our past and look toward our future. Seasons of Sustainable Agriculture celebrated 10 years of programming at CEFS—and what a celebration it’s been! Each of the CEFS units has been involved, and we drew nearly 3000 visitors to our activities over the season. Programming ranged from the Fall Festival, which drew families from Eastern North Carolina, to workshops that focused on specific production systems, marketing, and human nutrition. As I look at CEFS, which in 1994 was a “state farm” growing commodity crops, and see the vibrant and active research, teaching, and outreach facility it is today, I can only thank the visionary leaders and dedicated faculty, staff, and students at all three institutions that made CEFS a reality and help it thrive. In appreciation and recognition of our efforts, this year CEFS was presented the Institution of the Year award by the Carolina Farm Stewardship Association. We are honored to receive this award from one of our most important stakeholder groups.

Looking forward, one of the most important new developments is the formation of a Friends of CEFS membership organization and a Board of Advisors. Our first Board of Advisors meeting will take place at the end of November. The new board is an exciting one that we look forward to growing over the next year. The next issue of Inside CEFS will include introductions of the board members.

As the board is established, we will be activating new external advisory committees composed of board members, stakeholders, farmers, and other CEFS partners. The committees include: strategic planning, development, research, academic programs, and extension & outreach. As you read this, if you are interested in participating on one of these committees please let us know!

- Dr. Nancy Creamer, CEFS Director

On the Ground at Cherry Research Farm

This has been a year full of activities at the farm. Our visitor registration list says we’ve had 2900 guests who participated in tours, workshops and field days so far this year with a few more events on the schedule. The Seasons of Sustainable Agriculture has been a success with a variety of workshops that attracted participation from diverse audiences. We look forward to next year’s schedule of events.

Renovation is near completion at the Dairy Unit. We are replacing the milking system with a Delaval fourteen unit swing over Mid-line system installed by Piedmont Agri-Systems. The system is equipped with individual cow metering capability, automatic ID reader, automatic unit take off and robotic sorting system. This is a tremendous improvement from the previous milking system and will expand the research capabilities of the dairy.

The Swine Unit is expected to farrow the second group of sixteen sows on November 16, 2006. We currently have 18 developing replacement gilts and 29 barrows being finished for market from the last group that farrowed in June. We initially used wheat straw in the deep-bedded hoop houses, but have been disappointed with it. After this season’s corn harvest, we round baled the stubble to try as an alternative bedding material. So far, we have been impressed with the absorption of the corn stubble. Floyd Wiggins, Engineer with the Research Station Division, has submitted the plans for an office/lab to be constructed at the swine facility. The design is waiting for approval from the Office of State Construction before it can be sent out for bids. We will be able to better control bio-security with this new facility.

Dr. Chris Reberg-Horton is committee chairman for the development of the Organic Research Unit at CEFS. The committee has suggested five fields located behind the farm shop area to start the unit. Several meetings have been held to decide on rotations and develop a management plan that meets the needs of organic research. The unit will include three sections: agronomic, horticulture and transitional. NRCS has started intensive soil mapping of the fields for consideration in the design of research plots.

The Research Stations Division received a grant to convert to bio-diesel on all the research stations. Funds from the grant are being used to construct a reactor and start producing biodiesel at the Cherry Research Farm. A complete reactor package unit will be purchased for the Piedmont Research Station also. We are just starting discussions with the Dr. Alex Hobbs at the Solar Center to help with the design and operating procedures for the reactor. Plans are to utilize waste cooking oil to generate bio-fuel that will be used across the state in other research stations.

The staff at the Cherry Research Farm would like to extend a special thanks and appreciation to Dr. Jim Green for all of his leadership and support of the programs at our facility. We wish him good luck in his retirement.

- Eddie Pitzer, Farm Superintendent
Small Farm Unit Reaches Out to Local Community

In addition to serving as a resource for a number of on-farm workshops and demonstrations, home to the internship, and host of the Fall Festival, the CEFS Small Farm Unit (SFU) has also led various community outreach programs in Goldsboro and Wayne County. The staff, apprentices, and students of the SFU have had the opportunity to participate in many notable community projects over the course of the 2004-2006 seasons. For the past three seasons, for example, we have provided our local soup kitchen with fresh produce for the less advantaged members of the Goldsboro community. Through this effort the CEFS-SFU has provided thousands of pounds of fresh, local produce to local community-based projects addressing malnutrition.

In addition, the SFU has developed programs with the faculty administrators, nutritionists and chefs at the O’Berry Center (a state-run facility for developmentally-disabled people). In cooperation with the O’Berry Center, the CEFS-SFU has provided fresh produce for a number of clients as part of an ongoing project that evaluates the overall health of participating individuals. Preliminary findings suggest that patients who eat a wide variety of fresh produce experience measurable declines in allergic reactions to prescription medications.

Another particularly rewarding project is a new community garden resulting from collaboration between many local community organizations: CEFS, the Wayne County Public Library, Wayne County Cooperative Extension, the City of Goldsboro Recreation and Parks Department, the Boys’ and Girls’ Club of Wayne County, Friends of the Wayne County Public Library, Boy Scouts of America, Wayne County 4-H, the Goldsboro Target, and the Goldsboro News-Argus, plus many local families and individuals.

The garden project began when Shorlette Ammons-Stephens, the children’s librarian at the Wayne County Public Library, Wayne County Public Library, Wayne County Cooperative Extension, the City of Goldsboro Recreation and Parks Department, the Boys’ and Girls’ Club of Wayne County, Friends of the Wayne County Public Library, Boy Scouts of America, Wayne County 4-H, the Goldsboro Target, and the Goldsboro News-Argus, plus many local families and individuals.

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We all agreed that a new garden that could serve as an ongoing project for the multiple generations, ethnicities, and social groups that make up Goldsboro’s citizenry was a wonderful possibility. For CEFS-SFU, the mandate of community outreach and education fit well into such a program.

Fortunately for the SFU staff, our farm assistant, Megan Riley, was moved by this project and took a lead role as the principle contact and educator. So began the meetings to bring the collaborating organizations into agreement on the choice of a site, develop the educational programs associated with the garden, find resources for labor and materials necessary for the garden’s construction and maintenance, and publicize the program. This planning took place between January and June, 2006, followed by garden construction days in early June. Educational programming began in June, and ran weekly through August (“back-to-school time”).

The garden’s first phase consists of multiple raised beds within a 50’x50 area, with 4’ wide paths in between. The design allows for ease of access by all persons. During this phase we also sought some local funding for tools, seeds, etc. Weekly programming this season included a diversity of subjects, from vermiculture to seed-starting and saving to organic gardening to the sharing of traditional family recipes using garden-fresh ingredients. The latter drew from participating families of many diverse backgrounds such as India, Mexico, and America’s Deep South. Among the crops we grew in the garden this year were: basil, mint, sage, eggplant, tomatoes, tomatillos, dill, cucumbers, zinnias, summer and winter squash, cantaloupe and watermelons, hot and sweet peppers, and okra.

As a result of these community-based projects and their many diverse participants, the Goldsboro community has grown closer and stronger. In addition, many of the local participants were able to cultivate an appreciation for CEFS and its other programs, such as the Fall Festival and the Seasons of Sustainable Agriculture. The SFU was also able to incorporate several international students from the CEFS-SFU summer program into these community-based projects.

(continued on next page)
New Research and Education Program in Uruguay

In spring 2006, the Cooperative State Research, Education, and Extension Service (CSREES) awarded a team of faculty from the NCSU College of Agriculture and Life Science an International Science and Education (ISE) grant to initiate a new collaboration with institutions in Uruguay on organic agriculture. This four year project will build on an existing relationship between the University of North Carolina system and five universities in Uruguay to promote internationalization of NCSU research, extension, and education and strengthen cross-cultural services and programs.

The project team is lead by Dr. Paul Mueller, Coordinator of the CEFS Farming Systems Research Unit. Other project directors are Dr. Nancy Creamer (CEFS Director), Dr. Jean-Marie Luginbuhl (Departments of Crop and Animal Science), Dr. Michelle Schroeder (Department of Crop Science), Dr. Sophia Kathariou (Department of Food Science), and Gary Bullen (Department of Agricultural Economics). This diverse team was created to address the broad range of issues involved in international and organic agriculture including production, food safety, marketing, and education.

Dr. Mueller cites several factors that make this project both timely and necessary. Organic production is one of the fastest growing sectors of global agriculture. NCSU, and particularly CEFS, have long been national leaders in scientific research of organic production. Collaboration with scientists in Uruguay will give NCSU researchers opportunities to both share their expertise and enhance their knowledge of innovations and technologies used elsewhere.

Another important issue the project addresses is the growing Latino population in North Carolina. As one of the state’s land-grant universities, NCSU must enhance its capacity to meet the needs of this population. “The more opportunities we can provide for students, faculty, and extension personnel to learn about the culture, language, and history of Latin America,” says Mueller, “the better equipped they will be to serve our state’s Latino residents.”

In Uruguay, the project team will work closely with two institutions, Batovi Instituto Orgánico (BIO-Uruguay) and Universidad de la Empresa (UDE). BIO-Uruguay is a nonprofit organization dedicated to providing research and training opportunities in organic agriculture, agroecology, and Latin American language and culture for researchers and students worldwide. The College of Agricultural Sciences at UDE provides national leadership in agricultural research, extension, and academic programs.

A highlight activity of the project will be a short course in Uruguay entitled “Organic Agriculture in Latin America” scheduled for March 2008. NCSU participants will have the option of spending one or two weeks in Uruguay to study organic production and research, extension strategies, cultural traditions, and Spanish language. The course will also be open to Uruguayan faculty, students, and extension per-

Small Farm Unit Outreach (con’t)

The community outreach programs of CEFS and its community partners have been mutually enriching and mark the beginning of a long relationship between the people of Eastern North Carolina and its local, regional, national and global neighbors.

For more information on the community outreach and education programs of the Small Farm Unit at CEFS, contact Bryan Green at bgreen@ncsu.edu, Megan Riley at wonder-iley@hotmail.com, or CEFS at cefs_info@ncsu.edu.

- Bryan Green, Small Farm Manager
- Megan Riley, Assistant Farm Manager

Let’s Make a Meal!

More than 100,000 North Carolina State Fair visitors learned why and how to by food products from local producers through a new computer game, Let’s Make a Meal. Game contestants had the opportunity to sit at the counter of Rita’s Diner and select menu items to make their meal. With a spin of the wheel, they learned whether their meal was sourced locally or globally, and how this impacted the environment, local economy, and farm families. The game was part of an exhibit developed by CEFS, the Carolina Farm Stewardship Association, Central Carolina Community College, Heifer International, and Whole Foods Markets.

Thank you to Digital Entities for designing this excellent tool, to Whole Foods for funding the production of Let’s Make a Meal, and to everyone who volunteered at the exhibit!
Uruguay Program (con’t)

In addition to participating in the short course, each working group will develop follow up activities for each of its members. It is anticipated that extension agents will develop at least one new program for Latino clients in North Carolina following the short course, with funding available to carry out the program. Opportunities for student activities include internships, study abroad programs, and research in Uruguay at BIO-Uruguay, UDE, or other host institution. Students will have the opportunity to apply for funding to support travel to Uruguay for such activities.

Working groups will also lead campus and state-wide initiatives to share project results and strengthen partnerships between the University of North Carolina system and institutions in Uruguay.

Planned activities include a campus visit by Dr. Alda Rodriguez of BIO-Uruguay and Dean Claudio Williman of UDE, a statewide workshop on Organic Production and Latin America, development of materials for use in NCSU courses, on-campus lectures, and presentations at regional and national professional conferences.

Interested in Joining the Project Team?

Students, extension agents, and faculty members: if you have an interest in organic agriculture, Latin America, and global agricultural issues, consider joining the project team! For more information, contact Dr. Paul Mueller (email: paul_mueller@ncsu.edu; phone: 919-515-5825).

- Denise Finney, CEFS Research Associate

CEFS Collaborates on USDA Farm Energy Grant

CEFS is partnering with the National Center for Alternative Technology (NCAT), Piedmont Biofuels (Pittsboro, NC) and the New England Small Farm Institute (Belchertown, MA) in a USDA Risk Management Agency (RMA) Grant. This one year grant will allow the partners to provide energy management workshops for farmers and create new energy-related publications. This fall and winter (2006-07) CEFS and NCDA Cherry Research Farm staff will work closely with engineering staff from NCAT to assess current energy usage and potentials for alternative energy sources at CEFS. This evaluation will become a case study. The study will serve as the basis for a workshop to be held at CEFS during 2007 to educate farmers on farm energy audits and alternative energy possibilities.

Another focus of the grant will be biofuels. Piedmont Biofuels will conduct biodiesel workshops and demonstrations throughout North Carolina and other states. Piedmont Biofuels will also work with NCAT to develop new publications on biofuel quality. This grant compliments several NCDA Cherry/CEFS energy initiatives, such as our current use of B20 (20% biofuels) as a fuel for farm equipment and energy crop production research underway on the farm.

- Steve Moore, Research & Extension Associate
NC Choices Enters New Growth Phase

In mid-October, Michael Pollan, UC Berkeley journalism professor and author of *Omnivore’s Dilemma: A Natural History of Four Meals*, visited the Triangle and spoke about the importance of buying locally-grown foods. He urged us to “vote with our forks,” by supporting area farmers three times a day, every time we sit down for a meal. NC Choices was honored to have the opportunity to visit with Pollan and, at his request, tour the NCSU swine unit.

His message is at the core of our mission. NC Choices – a project of CEFS and funded by the W.K. Kellogg Foundation - brings together a diverse mix of partners, including farmers, meat processors, environmental advocates and research and extension personnel, to promote local, sustainable and compassionate pork production. We embrace a profitable vision for North Carolina agriculture in which pasture-based livestock is integrated with crop production on independent, diversified family farms. At NC Choices, we aim to facilitate a direct connection between North Carolina hog farmers and the growing consumer demand for sustainably-raised meat products.

According to Mike Jones, extension swine specialist with NC A&T State University, there are approximately 100 hog farmers in the state who are raising pigs outdoors, independent from a vertically integrated company. NC Choices is currently working with close to 20 of these farmers, specifically those who are interested in or already marketing their pork directly to consumers (e.g., through Farmer’s Markets, Community-Supported Agriculture (CSA) arrangements, restaurants, etc...).

Beginning this summer, NC Choices brought on two new staff, Jennifer Curtis and Sarah Morgan. Together, they are focusing NC Choices on the issues of greatest importance to its farmers and partners. What exactly is NC Choices up to?

Providing Farmer Technical Support—In close coordination with NC A&T and NCSU swine and pasture-management specialists, NC Choices provides hands-on technical assistance to farmers on all aspects of pig production and direct marketing—animal health & welfare, pasture-management & conservation planning and processing & meat handling.

Improving Pork Processing—Many NC Choices farmers are dissatisfied with the status of meat processing for smaller producers in the state. Primary concerns include the long distances required to haul pigs for slaughter, lack of storage space and specialized equipment, and the relatively few places to brine and cure pork products (e.g., ham, bacon, and smoked sausage) for sale in direct markets. NC Choices is working with farmers and processors to better understand processing constraints and develop local solutions.

Developing Transparency in the Marketplace—In preparation for launching a consumer education campaign, NC Choices is developing guidelines for understanding and making marketing claims. We want farmers and buyers alike to have a consistent and meaningful definition of the underlying practices necessary to make such claims as “pasture-raised,” and “eco-friendly.”

Building Community—NC Choices is helping to support a community of local, sustainably-oriented hog producers, processors, meat buyers, consumers and research and extension personnel. We do this through our on-site visits, grower and Committee meetings, email communications and, COMING SOON, an NC Choices quarterly newsletter.

We welcome your comments and questions. For more information please contact:

Jennifer Curtis, Project Manager, NC Choices (919-967-0014) or jencurt@mindspring.com

Sarah Morgan, Producer Technical Services & Training (919-515-2390) or sarah_morgan@ncsu.edu

Visit us on-line at: www.ncchoices.com

New Publications


Final 2006 Workshop: Organic Grain Farmer Panel

The 2006 Seasons of Sustainable Agriculture educational workshop series will draw to a close with the Organic Grain Farmer Panel on Tuesday, December 12. This workshop will bring together current and future organic grain producers, organic suppliers, and organic grain buyers to share experiences and discuss steps to continue to grow the organic grain industry in North Carolina.

Like other workshops in the Seasons educational series, the Organic Grain Farmer Panel addresses a topic of interest to the agricultural community in our state. The market for organic grains in North Carolina is large and expanding every year. Currently, organic grain buyers in the state need over 600,000 bushels of organic feed corn, over 8,000 tons of soybean meal, and about 150,000 bushels of organic wheat. North Carolina producers are only meeting about 8% of this demand, meaning that over $8 million of organic grain is imported into North Carolina each year. Organic grain buyers currently report paying $6-7 per bushel for corn, $10-14 per bushel for soybeans, and $5-6.25 per bushel for wheat. This translates into a promising opportunity for growers in our state.

The Organic Grain Farm Panel will include presentations by an experienced organic grain grower as well as an extension economist who developed organic grain production budgets for North Carolina. The afternoon will be devoted to a panel discussion of challenges and opportunities for North Carolina organic grain producers. The workshop will take place on December 12 from 10 am to 2 pm at the Cherry Hospital Conference Center adjacent to CEFS. There is a $10 registration fee to cover the cost of lunch and informational materials. Please visit www.cefs.ncsu.edu to learn how to register.

The 2006 Seasons of Sustainable Agriculture educational series has included thirteen workshops on a broad range of topics relevant to producers, consumers, and agricultural professional in our region. More the 500 people participated in the workshops over the course of the season. In the next issue of Inside CEFS you’ll also hear more about the Mid-Atlantic Dairy Grazing Conference, another event which took place during the Seasons of Sustainable Agriculture. It has certainly been an exciting and successful season.

Plans are already underway for the 2007 educational series. If there are any topics you would like to have addressed at a CEFS workshop, email your suggestion(s) to cefs_info@ncsu.edu. We appreciate your feedback and look forward to seeing you at CEFS in 2007!

- Dense Finney, CEFS Research Associate

New Organic Production Guide Now Available

The CEFS Guide to Organic Production in the Southeast is now available on our website. This new resource was written by CEFS faculty and staff researchers to provide organic producers information on the management of organic crops in our region. Topics covered include:

- Composting on Organic Farms
- Cover Crops on Organic Farms
- Crop Rotations on Organic Farms
- Conservation Tillage
- Soil Quality Considerations
- Soil Fertility on Organic Farms
- Livestock Production on Organic Farms
- Organic Weed Management
- Organic Insect Management

Each chapter of the guide is available for download as a word or pdf document. Visit www.cefs.ncsu.edu/resources.htm for more information.

Upcoming Events in Sustainable Agriculture


Thank you *Seasons of Sustainable Agriculture* Sponsors!

**Sustainer**
- American Livestock Breeds Conservancy
- Carolina Farm Credit
- North Carolina A&T State University School of Agriculture and Environmental Sciences
- North Carolina Agricultural Foundation, Inc.
- North Carolina Agromedicine Institute
- North Carolina Department of Agriculture and Consumer Services
- North Carolina State University College of Agriculture and Life Sciences
- Southern Coastal Agromedicine Center
- W.K. Kellogg Foundation

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- Braswell Milling Company
- East Carolina Farm Credit
- North Carolina Farm Bureau Federation
- North Carolina SARE Model State Program
- Organic Valley Family of Farms
- Pasture Management Systems
- USDA Sustainable Agriculture Research and Education Program – Southern Region
- Westfalia Surge, Inc.
- Whole Foods Raleigh
- Yara North America

**Guardian**
- American Jersey Cattle Association
- Carolina Farm Stewardship Association
- Clifton Seed Company
- Dairymaster
- Early Girl Eatery of Asheville
- Goldsboro/Wayne County Travel and Tourism
- Mount Olive Pickle Company
- North Carolina Building & Enclosures
- North Carolina Crop Improvement Association
- Piedmont Agri-Systems
- Southern States Cooperative
- Wayne County Cooperative Extension

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Inside CEFS is the quarterly newsletter of the Center for Environmental Farming Systems (CEFS), a partnership of the North Carolina State University College of Agriculture and Life Sciences, the North Carolina A&T College of Agriculture and Environmental Science, and the North Carolina Department of Agriculture and Consumer Services.

Inside CEFS is edited by Denise Finney, denise_finney@ncsu.edu. The next edition will be published in February 2007; the submission deadline is January 10.