

CEFS NEWS

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IN THIS ISSUE:

1. FROM THE DIRECTOR
2. NEWS FROM THE FARM
3. NEWS AND NOTES FROM NCA&T
4. IS IT TIME FOR ORGANIC AT THE CEFS DAIRY UNIT?
5. ON THE FARMING SYSTEMS UNIT
6. BEEF UNIT HOSTS SENEPOL CATTLE BREEDERS ASSOCIATION
7. COVER CROP TRIAL REPORT
8. CEFS ON THE RADIO!?!?
9. MEET MEGAN RILEY, FARM APPRENTICE
10. 2005 INTERN PROGRAM
11. HOOP HOUSE CONSTRUCTION PROGRESS
12. NORTH CAROLINA CHOICES LAUNCHES WEBSITE
13. ORGANIC GRAIN PROJECT UPDATE
14. CEFS QUARTERLY MEETING NOTES
15. RECENT PUBLICATIONS FROM CEFS RESEARCH
16. JOB OPENING AT CEFS
17. UPCOMING EVENTS IN SUSTAINABLE AGRICULTURE
18. THE ART OF FARMING



1. FROM THE DIRECTOR

It's been a busy three months, and a lot of exciting things have been happening at CEFS, as you'll see when reading the newsletter. The farm is hopping with activity, with the interns, graduate students, and faculty busy with their field activities and if haven't visited lately, please try to work that into your schedule.

We have been busy with the "development" side of CEFS. Final documents are in process that will formally set up a "Friends of CEFS" organization and establish a Friends of CEFS Board of Advisors to assist and guide us with fundraising and outreach. In addition, an important new component will be a "stakeholder advisory council" to assist and guide us in program development. These new organizational structures will be very helpful in helping us focus and enhance the CEFS program as we look to the future. Denise Finney has been instrumental in the development of new informational brochures that highlight our programs in the context of North Carolina agriculture and rural development goals. The Friends of CEFS organization and board will be "launched" at next year's anniversary celebration (May, 2006) that will also include a dedication of the new hoop house swine facility. More on that later....

We have two new focus areas being discussed for development at CEFS. The first was initiated by Jim Green, Paul Mueller, and Jean-Marie Luginbuhl, who recently brought together several individuals to discuss agroforestry opportunities at CEFS. Representatives from CEFS, NRCS, and the NC State College of Natural Resources met in early May to discuss possibilities. Demonstrations to be developed include thinning a 40 acre block and establishing pasture under the pines, an alley cropping project, and re-establishment strategies following a clear cutting operation. Bill Perry, assistant superintendent at CEFS, has also initiated a wildlife enhancement/evaluation program. An increase of quail and other wildlife since the inception of the CEFS program has been observed but not quantified. Representatives from the CEFS program met

CEFS NEWS

with representatives from the NC Wildlife Resources Commission, NCSU Forestry Extension, and Quail Unlimited to discuss opportunities at CEFS. A baseline count of quail and other types of wildlife will be conducted this summer. Many of the CEFS summer interns have volunteered to help with the count.

The Crop Science Department is in the process of hiring an Organic Cropping Systems tenure-track faculty position. The position will be 50% research and 50% extension. We at the CEFS program are thrilled and looking forward to working with the new individual when the hiring process is complete. A very exceptional pool of applicants has applied for the position and four have been selected for interviews. Please watch the CEFS list serve for dates for the interviews (I believe all of these will be conducted in July) and make every effort to attend and provide input to the process.

We have hosted many tours over the last few months, and continue to be pleased with the widespread interest in the CEFS program. On May 12th, we hosted a group representing the Soil Quality Team (formerly NRCS Soil Quality Institute), which is part of the NRCS East National Technology Support Center that has recently relocated to Greensboro, NC. Many exciting ideas for cooperation and collaboration were discussed. On May 19th, we hosted the new North Carolina Commissioner of Agriculture, Steve Troxler, and key members of his staff. We were very pleased to have the opportunity to share our programs with the Commissioner. On May 23rd, and again on June 21 we hosted several key state and federal legislators or their aids for a tour of CEFS. We received a very enthusiastic response and look forward to more legislative tours in the future. Susan Mellage coordinated a CEFS tour on May 26 for Southeast leaders of Heifer International. We will work towards developing new collaborative opportunities with this important NGO in the future.

Congratulations to Debbie Roos, who received an NCSU Outstanding Extension Service Award in April and was elected into the Academy of Outstanding Faculty Engaged in Extension!

In addition to hosting tours at CEFS, we have been invited to talk about the CEFS program in several local forums. In addition to scientific meetings, presentations have recently been made to the North Raleigh Exchange Club, the Kiwanis Club, and the Wake County Agribusiness Council. There have been some important informational news articles published as well, including a two-page feature in a recent Goldsboro New-Argus Sunday paper highlighting the good work of Bryan Green and the Small Farm Unit (by the way, Bryan is becoming quite a celebrity in the Goldsboro area with his 30 minute weekly talk radio show on a local AM station), and an article in the Sierra Club membership newsletter going to 20,000 North Carolina Sierra Club members featuring Susan Mellage and the NC Choices project.

We have been selected to resubmit our NSF IGERT proposal that would establish a joint Ph.D. program in Sustainable Agriculture at NC State and Duke University. NC A&T SU will also play a key role in identifying and supporting MS students from NC A&T for recruitment into the sustainable agriculture Ph.D. program, and will participate with NC State and Duke faculty in all aspects of program development and graduate training. The \$3.5 million IGERT would fund roughly 25 Ph.D. student assistantships. Four hundred twenty-one pre-proposals were submitted and 80 were selected to be developed into full proposals. All three of our pre-proposal reviews were rated “excellent”, the highest rating possible. Approximately 25 awards will be made, so the competition is still very tough. Full proposals are due August 5.

Winrock International has invited CEFS to collaborate on a USDA Risk Management Agency Proposal that was submitted last week. If funded, CEFS would develop a pilot program that will provide direct assistance to a network of farmers in Eastern North Carolina who are underrepresented transitioning tobacco growers. This work would include an on-farm research component, an outreach component, and a networking component.

—Dr. Nancy Creamer, CEFS Director

2. NEWS FROM THE FARM

We are starting to see the results of two weeks without rain and 90 degree temperatures. Most of the corn is starting to tassel under this stressed condition. If the drought continues we will see a

CEFS NEWS

decrease in potential yields. Due to the dry conditions and lack of grazing, stored hay is already being fed to the beef herd.

Wayne County Extension Director, Howard Scott, and I have been working with community leaders and local farmers to seek planning funds from the General Assembly for a facility to be located on Cherry Research Farm property. This facility would have offices and support program for the Wayne County Cooperative Extension, Cherry Research Farm, CEFS, the Farm Service Agency, and the Natural Resource Conservation Service. This facility would serve as a resource center for the agricultural community.

Construction was started on the swine hoop houses in May. Four 40'x90' hoop houses are being constructed. Three of the houses will be used to finish up to 200 head per house with the fourth house used as a gestation barn for sows. The contractor is hoping to have his part of the construction finished by September, and the farm crew has several tasks to complete before the facility will be finished. Please see Article 11 of the newsletter entitled "Hoop House Progress" for more information on this project.

Benghal Dayflower (a.k.a. Tropical spiderwort, TSW) is starting to appear in several of the locations on the station where it was treated last year. The Plant Industry Division of NCDA&CS is drafting Compliance Agreements for the CEFS project and the Cherry Research Farm. These agreements will outline the regulations and procedures we will follow to control the spread of and eradicate TSW. Fumigation was done in eighty acres of the Cherry Research Farm that is not involved in the CEFS project. We will provide information at the office when you sign in to keep you informed about infected areas and the required regulations.

–Eddie Pitzer, Station Superintendent

3. NEWS AND NOTES FROM NC A&T

The NCA&TSU collaborators at CEFS have been working on the enhancement of the Small Farm Unit/Student Farm of CEFS. This CEFS unit is devoted to the summer intern program and also serves as a research and demonstration site for small farm enterprises. Many people have been asking, so which is it - Student Farm or Small Farm? We worked through a discussion of this question with many stakeholders last October because we wanted to make the best use of this wonderful resource. After long discussion we decided that the best answer is "Yes!" to that question since it is both the student farm and the small farm demonstration and outreach unit!

The Small Farm Unit/Student Farm is under the able leadership, again this year, of Bryan Green. He is partially paid with NCA&TSU funds and has a strong interest in developing demonstrations of successful small scale enterprises for eastern North Carolina. He also has a love of the Spanish language, experience in Mexico and a desire to include Hispanic speakers as an audience for learning experiences at the Small Farm Unit.

Now is the time to see the small farm in all its glory. For two months of the year the farm is a beehive of activity with the work of the summer interns transforming it into a beautiful summer display of agricultural enterprises. From flowers to goats, the unit is aglow with learning experiences. We have also expanded the internship opportunity by offering people who want to spend a whole season working in and learning small scale agriculture the opportunity to be a farm apprentice.

Beyond that, Ruth Kemp and other local volunteers are working with Bryan and the farm crew to develop things of interest to local audiences in Wayne and surrounding counties. When I looked last, they had several beautiful raised bed plots with vegetables growing as a test demonstration of things that might be of interest to local customers or families interested in starting their own home gardens. Ruth and others are organizing taste tests and other customer receptivity tests as well as looking at nutrition, quality in canning, and other characteristics that local customers might be interested in.

Plans are under way to set up an agricultural literacy tour at the Small Farm Unit/Student Farm with a strong involvement of NCA&TSU. This program, which replicates what we are already doing at the NCA&TSU Farm in Greensboro, will offer stops with educational experiences for elementary school children and their teachers as a way of building a stronger connection between non-

CEFS NEWS

farm youth and agriculture in North Carolina. Travella Free, NCA&TSU Cooperative Extension Program, will be working with Bryan to develop the plan at CEFS.

NCA&TSU is happy to be involved in all of the good things happening at the Small Farm Unit/Student Farm. It is a valuable resource for eastern North Carolina as agriculture undergoes great transformations in response to the changing global economy. It is a place to demonstrate and observe small scale alternative enterprises that can fit into eastern production systems and respond to local market interests. With support from the Small Farm Unit, farms, farmers' markets, and local food systems can grow as viable economic activities across that part of the state.

-Dr. John O'Sullivan, Farm Management & Marketing Specialist

4. IS IT TIME FOR ORGANIC AT THE CEFS DAIRY UNIT?

The primary objective for work at the dairy unit at CEFS is to examine strategies to increase the competitive position of North Carolina's dairy industry as well as the dairy industry in the Southeastern US. With increasing regional and national demand for organic dairy products, there may be a role for the CEFS dairy in demonstrating and/or researching issues associated with organic dairy production.

When the CEFS dairy facilities were dedicated in 1998, optimal use of pasture was set as the basis for research and demonstration projects. Since then, pasture-related studies have included work on deworming strategies in pastured young stock, comparing two pasture stocking rates for lactating cows, monitoring dung beetle activity, and alternative strategies for controlling horn flies for pastured cows and heifers. Also, collaborative studies are underway with Virginia Tech and Clemson on antioxidant levels in blood and fatty acid profiles in forages and milk from pastured cows at CEFS and on cooperating farms.

An external review team examined dairy research at all of the research stations in NC in 2004 and concluded that the CEFS dairy is unique within the state as well as across the region in providing research-based information on pasture systems. Because of the requirement for substantial use of pasture in organic dairy production, the CEFS dairy is particularly well situated to become a regional and national leader for demonstration and research on organic milk production. Such an emphasis would be consistent with a mission to provide objective information for potentially viable alternative production systems for current or future dairy producers.

To get us started thinking in detail about organic dairying in the region, we have submitted a planning proposal "Developing an Organic Dairy Industry in the southeastern United States" to the Southern Sustainable Agriculture Research and Education program (S-SARE). If our proposal is funded, we expect that the planning activities will include a study tour to organic dairy producers and existing research efforts in the northeastern U.S., and the development of additional funding proposals for research and educational programs to provide needed information for producers and others in our region. Planning participants will include producers, other industry representatives, and faculty from various departments at NCSU, NCA&T, Clemson, Virginia Tech, and the University of Tennessee.

The impetus for this proposal came from the dairy industry. Because of growing consumer demand, we have had serious inquiries about organic dairy production from local dairy processors and a national dairy cooperative that are looking to expand their supply areas into the Southeast. However, given the total lack of organic farm production in our region, many things must come together if local dairy farmers are to take advantage of this opportunity to supply this growing local market profitably:

- Milk processors will need minimum volumes to make processing organic milk feasible, which likely means multiple dairy farmers must be involved and coordination will be needed.
- Dairy farmers need to know if organic dairy production is feasible and profitable under the farming and economic conditions that prevail in this region.
- Questions about transitioning to organic need to be addressed.
- There must be a reliable source(s) of organic feed ingredients.
- Producers will need technical information and support from industry and extension, including veterinary care, herd management, nutrition, agronomy, and business.

CEFS NEWS

If organic milk production is to be established in the Southeast in a timely manner, progress must be made on several fronts simultaneously. Resources and commitments must be made by individuals with expertise in different areas. Activities must be coordinated in order to address farming issues in an effective and integrated systems approach. For example, requirements of the organic rules likely will mean changes in cropping patterns in order to maintain soil fertility and control pests. Furthermore, higher prices for organic livestock feed ingredients change the economic value of homegrown crops in dairy diets relative to their value under conventional milk production conditions and likely will lead to significant changes in the type of crops grown.

Few individuals in the Southeast have any first hand knowledge or expertise in organic dairy production systems. Also, there is lack of applied research on organic dairy production systems in the region. Two areas are of particular concern: 1) farmers and veterinarians are unfamiliar with treatment options available to organic producers and applied research to demonstrate efficacy, followed by education and training, will be required to achieve acceptance; 2) regional soils and climate provide opportunities to grow multiple forage crops for long grazing seasons but knowledge and experience to produce such forages organically is limited.

Interested producers will need information on organic rules and certification procedures. They will need information and assistance in developing a practical and profitable farm plan. Once they embark upon an organic transition, they will need mentoring assistance to address problems and issues that will inevitably arise.

The SARE planning proposal is the starting point for the establishment and growth of organic dairy production in the region. If our planning proposal is funded and if it leads to additional research funds, we would expect that there will be a significant role for the CEFS dairy unit in future research and educational efforts in organic dairy production. The goal is to support family-based dairy farms and create an opportunity to be profitable and competitive, thereby contributing to the viability of local communities.

–Dr. Steve Washburn, Dairy Unit Coordinator & Dr. Geoff Benson, Extension Economist

5. ON THE FARMING SYSTEMS UNIT

All of the crops in the Farming Systems Trial have been planted, and we are in a “rain dance” mode due to current dry conditions. Corn is coming along well in most of our systems after a rough start in the crop/animal and organic fields. We had to re-plant the crop-animal due to early wireworm/cutworm damage. These were fields just coming out of pasture and were no-till planted. The organic corn was planted late to obtain a “stale seedbed”, but a shift in rotation plans due to spiderwort issues resulted in corn planted after corn which caused worm damage in some isolated areas. Grain sorghum has been planted in the crop/animal system and is coming along well in the face of the present mini-drought. As expected, the grain sorghum is not yet showing drought stress while most of the corn was “rolled up” this week.

Crops currently in the organic system include wheat, hay, and sweet potato. Wheat harvest began on June 23, after which a cowpea cover crop will be planted in preparation for cabbage planting in August. Sweet potato slips were set the week of June 13 and are suffering at the moment from lack of rain. Replants of dead slips will be ongoing during the final weeks of June. Finally, we have had good success with our organic hay fields this spring. We had an excellent first harvest about 35 days ago and the second crop is now ready.

In the crop/animal system we have had excellent success with establishment of cool (MaxQ tall fescue) and warm (switchgrass, gamagrass and big bluestem) – season pastures. We had a good hay cutting of the spring growth of tall fescue and the aftermath is now being grazed off by dairy steers. Stands of the warm-season pastures are very good; however, these pastures won’t be ready for grazing until next spring.

Spiderwort scouting and eradication is going well in the Farming Systems Unit. No major unexpected out-breaks have been experienced, and Matt Finney and his crew are creating an excellent base-line grid map with our GPS equipment.

–Dr. Paul Mueller, Farming Systems Unit Coordinator

CEFS NEWS

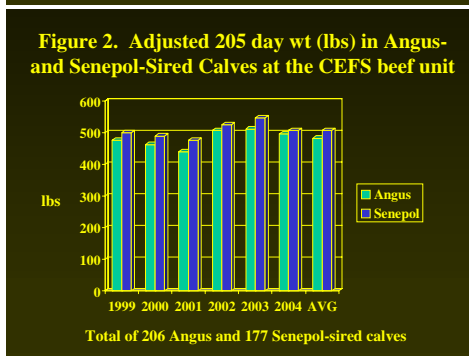
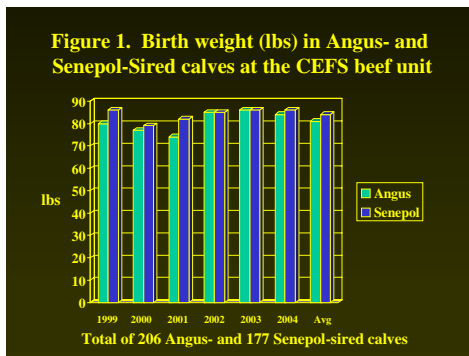
6. BEEF UNIT HOSTS SENEPOL CATTLE BREEDERS ASSOCIATION

On June 23, 2005 the CEFS Beef Unit hosted a group of Senepol breeders as part of their national convention which was held this year in North Carolina. A group of 54 Senepol enthusiasts spent 4 hours at CEFS viewing the cattle and hearing details of the results of our project. The participants on the tour included the owner/managers of Castle Nugent Farm and Annlay Farm, the two farms in the Virgin Islands where the Senepol breed was developed. Also attending were producers from across the southern US, as well as from Brazil and Panama.



A 1/2 Angus, 1/2 Senepol cow at CEFS with a 1/4 Senepol calf.

For the last 7 years we have been breeding part of the mature cow herd at CEFS to Senepol bulls as a comparison to the common approach of using Angus bulls. We have been weighing the calves at birth and at weaning and retaining ownership on them through finished weights. Senepol cattle are very heat tolerant, and combine that trait with good temperament, growth rate, and carcass quality. We wanted to see if incorporating Senepol into our cow herd would improve cow comfort in our hot, humid environment.



The first 4 years of the project the steers were sent to a feedlot in Texas and we received performance and carcass data back on them. This worked out part of the time, but part of the time did not work well because communication with folks in the feedlot was not as good as we would like. Because of our bad experiences, the last two years the steer calves have been retained in North Carolina and fed out at the Butner Beef Cattle Field Laboratory where we have the ability to gather growth rate data as well as individual feed intake.

Over the first 6 calf crops for which we have information, the Senepol-sired calves (1/2 Senepol) have shown similar weights at birth; with about a 20 lb advantage in weaning weights (Figures 1 and 2). After weaning, the Angus-sired calves start to gain on the 1/2 Senepol calves, such that weights are similar between the groups by December, and then by the time calves are finished in June the Angus are about 75 lbs heavier than the 1/2 Senepols. We interpret this to mean that the 1/2 Senepol cattle are more heat resistant and have an advantage during the summer when they are still with their mothers. Once the weather cools off though, it appears that the

Angus have a growth advantage. Despite some difference in the growth rate between the two breed types, all do quite well in the feedlot and finish off with similar carcass grade.

We had a lot of feedback on the Senepol project from this very interested group. They encouraged us to not discriminate against red cattle (the local markets do discount these red cattle) and to work on determining how much Senepol blood is needed to impart the heat tolerance characteristics. We now have enough 1/2 Senepol cows that we have a significant number of 1/4 blood calves being born and will start to see how they perform.

—Dr. Matt Poore, Beef Unit Coordinator



A 1/2 Hereford, 1/2 Senepol cow with a 3/4 Senepol calf on a local producer's farm.

CEFS NEWS

7. COVER CROP TRIAL REPORT

A comparison of four cover crop treatments was planted as a demonstration of on-farm research methods for our Turkish visitors during the HasNa project last November. The treatments were planted on October 5, 2004 in field C11 directly behind the equipment sheds. Although originally planted as a demonstration, the comparison became an opportunity to compare the above ground biomass contribution of the cover crops.

The four treatments were winter wheat, winter rye, winter rye with clover, and triticale. Plot width for each treatment was 2 meters by 30 meters. There were 7 replications planted in a randomized complete block design. Ken Fager assisted in planting the treatments so that we would achieve the same population of small grain plants for each treatment. This was calculated from seed weight and germination rates. Thus, the actual seed drilled per treatment were 76, 122, and 164 kg/ha respectively for rye, triticale, and wheat.

Our Turkish visitors assisted in counting the tillers on November 2. Tiller numbers were not found to be significantly different with treatment averages ranging from 64 to 70 tillers per square foot, with an overall average of 67. Biomass measurements were taken in ½ square meter quadrats on December 20, 2004 and March 22, 2005. The triticale and two rye treatments were not significantly different in December, averaging 1.1 t/a. The biomass of wheat was significantly lower ($p=0.05$) than the other three at 0.9 t/a on a dry matter basis.

The last measure of biomass was taken on March before the cover crops were incorporated into the soil. The grasses were primarily in Feekes growth stage 8. There was no evidence of clover left in the rye/clover treatment. The average biomass of both rye treatments was 2.7 t/a, significantly greater than the biomass of wheat, which was 1.9 t/a. The wheat, in turn, was significantly greater in dry matter than the triticale which contributed 1.1 t/a. Thus, from this trial, it appears that winter rye is a larger contributor of green manure above ground biomass than wheat and triticale.

-Dr. Phil Rzewnicki, Organic Unit Coordinator

8. CEFS ON THE RADIO!?!?

Every Thursday (8:30-9:00) morning Wayne Alley hosts a talk show (1150am WGBR) (Goldsboro) which features speakers from the Center for Environmental Farming Systems. Bryan Green (Busha) is the co-host. This program features such weekly reports as:

"News from the Farm" (What's happening at the Small Farm Unit & CEFS)

"Nutrient of the Week" (Educational programming on nutrition and local foods)

"News from The Almanac" (Features advice from the Farmers' Almanac)

The program focuses on promoting local food systems and encourages listeners to support their local farmers (organic and conventional) by buying from local vendors at the Goldsboro farmers market and other markets. The program also gives a great deal of attention to organic production and the promotion of the organic market as a niche market for farmers seeking alternative economic opportunities. Finally, the program offers advice to new farmers seeking to enter the local food marketplace.

Guest speakers add to the depth of the programming. Recent guests have included Eddie Pitzer (NCDA), who talked about overall CEFS programs; John O'Sullivan (NCA&T), who discussed marketing strategies; and Steve Washburn (NCSU), who focused on dairy cattle and the milk industry. The program has been running every week but may soon alternate weeks with the Agriculture Extension office in Goldsboro. We may also work together side by side on programs in the future.

Responses are starting to come in, as Busha is receiving calls from local growers who have heard the program on the radio. We are grateful to Wayne Alley, the people of WGBR and Eddie Pitzer for making possible this enjoyable and effective outreach tool for CEFS and its collaborators. With growers also responding to the recent newspaper coverage in the News Argus, the Goldsboro newspaper, local recognition of the Small Farm Unit is definitely growing.

From the farm, the 2005 intern class is settled in and hard at work. We are delivering top quality foods to the Brickyard Market every Friday. Everyone is encouraged to reach out and eat well by coming and patronizing the farm stand on the brickyard. Tell your friends and co-workers to do the

CEFS NEWS

same! We have a great variety of products for the market, and more on the way. The integrated production system is in full swing, and we now have the following growing on the farm:

- 70+ varieties of vegetables and small fruits
- 12 goats (free range)
- 50 chickens (free range)
- 21 turkeys (free range)

In addition to on-farm activities, outreach efforts from the Small Farm Unit continue. The Small Farm Unit is meeting and working with a grower from South Carolina and another from the Goldsboro area to investigate the organic market-place. Busha and the interns recently hosted a children's education day at the Wayne County Public Library. They established an educational table and offered young people an opportunity to experience agriculture through photos, actual plants and organic produce as well as seeing and handling young chickens. The students also had many books available from the Wayne County Public Library on display related to agriculture. A small grant is being written by the Library, with the Small Farm Unit as a collaborator, to offer middle school and high school students an educational opportunity related to water and water conservation.

–Bryan 'Busha' Green, Small Farm Manager



You'll find more than just produce Fridays on the brickyard. Matt Poore and Bryan Green provide music at a recent Brickyard Market.

9. MEET MEGAN RILEY, FARM APPRENTICE

Initiated three years ago, the apprentice program on the Small Farm Unit offers students seeking intensive on-farm training the opportunity to work and live on the farm for an entire production season. Individuals who have participated in the program have not only learned the ins and outs of running a small, diversified farm, but have also made substantial contributions to the growth of the Small Farm Unit. This year's apprentice is Megan Riley. A native North Carolinian, Megan holds a degree in Anthropology from UNC-Chapel Hill and has extensive experience in the

horticulture industry and a deep interest in community nutrition and self-sufficiency.



Megan helps a customer choose the right pint of blueberries on the brickyard

Megan began her apprenticeship on April 18 and immediately dove into what has proven to be non-stop activity on the small farm. She is involved in all aspects of the farm from crop production and animal husbandry to marketing and outreach programs. In addition to bringing a positive attitude and willingness to work hard, Megan's previous experiences have enabled her to lead several new projects on the farm. She is working closely with local volunteers to develop the demonstration nutrition garden aimed at encouraging local families to plant home gardens. She is also contributing to plans for increased permaculture

on the farm, such as fruit and nut trees and perennial herbs. With several years of experience growing sprouts, Megan is also developing sprout production on the farm.

Motivated by an interest to learn what it takes to run a farm, Megan says that the apprentice experience has already far exceeded any thoughts she had about what it would be like. She revels in the opportunity to work outside and appears to be neither intimidated nor tired by the long hours farming demands. Megan appreciates working on a farm that strives to be biologically sustainable, such as working toward self-sufficiency in soil fertility management, and especially enjoys time spent working with the turkeys, goats, and chickens. Megan also values the human aspects of agriculture and the ways in which the small farm reaches out to the Goldsboro and NCSU communities. The soup kitchen and home garden demo have given Megan ample opportunity to share the farm with others, and she has learned a great deal about the consumer side of agriculture by interacting with consumers

CEFS NEWS

at the Brickyard market. The market is also a great teaching experience Megan uses to talk to customers about agriculture, nutrition, and the joys of working with nature. As an apprentice, Megan works closely with the interns during their 8-week program, and says that “the chance to work and share with this year's interns is a priceless gift; their skills, abilities, and ways of being in the world are awesome to discover.”

Megan hopes to apply her experiences to help communities work toward becoming self-sufficient. Though she says she may never own her own farm, she definitely wants to have a place to grow food, work outside, and provide for others. The CEFS apprenticeship is building on her previous experiences and giving her a lot of food for thought as she develops her vision of sustainable communities. For all she credits the apprenticeship as offering her, CEFS will greatly benefit from all of Megan's contributions to the small farm this season. In words of farm manager Bryan Green, “She helps beyond words and is deserving of appreciation.”

–Denise Finney, Newsletter Editor

10. 2005 INTERN PROGRAM

Our summer interns arrived in early June and indicate they are learning a lot already! Most are surprised by the depth of sustainable agriculture subject matter we cover through presentations, hands-on field activities, and field trips and consider the internship a good experience.



Interns Janet Buonanno and Tania Gonzalez sell produce at the Brickyard Market

We owe a large debt of gratitude to the O'Berry Center for coming through, yet again, with needed lodging units within a couple days of the interns' arrival. It was discovered in May that the on-line fire alarm a Cherry Hospital house we were going to use was faulty, making it uninhabitable. Our thanks to Dennis Mays at the O'Berry Center! We also thank Mrs. Mary Reese at the Cherry Hospital for the two houses belonging to the hospital that we still occupy.

For your interest, here's our list of interns and their current college information. We originally had 16 who were about to come but within two weeks of the start of the program one announced discovery of a serious illness in himself, another found an internship closer to home, and a third had a family emergency. But we have 13 very active and enthusiastic participants and are glad they're here! Look for reports on the internship experience from this year's class in the next issue of the CEFS News.

Adela	Anszkiewicz	Junior	Agroecology	Mexico
Christopher	Barrow	Senior	Human Geography	North Carolina
Janet	Buonanno	Soph	Int'l Agric	New York
Tania	Gonzalez	Junior	Agroecology	Mexico
Melina	Lozano	Junior	Agroecology	Mexico
Susan	O'Neil	Junior	Communications	North Carolina
Margaret	Porell	Senior	Env Sci	North Carolina
Ellie	Thomas	Soph	Env Studies	North Carolina
Katarzyna	Trzopek	Senior	Economics	Pennsylvania
Amanda	Watson	Junior	Biol Sciences	South Carolina
John	Williams	Senior	Interdisciplinary	Missouri
Patsy	Wilson	Senior	Biology/Ag Biotech	Kentucky
Margaret	Worthington	Senior	Env Sci	North Carolina

–Dr. Phil Rzewnicki, Organic Unit Coordinator

CEFS NEWS

1 1. HOOP HOUSE CONSTRUCTION PROGRESS

As was indicated in the last issue of this newsletter, a ‘new face’ officially joined the personnel at CEFS, NCSU, and NC at large; thanks to all parties that worked tirelessly hard to bring this to pass.

On May 2, 2005, Harry H. Cummings Construction Company broke ground to start the construction of the first 4 hoop houses where antibiotic-free pigs will be reared at CEFS. One hoop house will be designed for breeding through to farrowing, with the remaining three designated for grower-finisher pigs. Dirt was piled high to keep the ground dry and the fill slab heights were set between 24.78 and 25.09 m above sea level, in low and high places, respectively. The dimensions of the structures are 27.55 L × 12.19 W × 5.92 H m. The first four houses are expected to be complete by August 31, 2005, and advanced ground preparations have also been made for two additional hoop houses to be constructed. Fourteen sows that will be used as the initial stock to populate these structures have arrived from Kentucky and are currently being housed at another NCSU facility. All are gestating and expected to farrow soon.

On the management side, arrangements are being made to structure the steering and advisory committees that will cast visions, formulate strategies, and oversee the successful accomplishment of the alternative swine program’s goals. These committees will include NCSU and NCA&TSU faculty members with interests in swine production and research as well as farmers and representatives of other organizations such as ALBC, RAFI, CFSA, NCARS, and NCCES, among others. We express gratitude for all support rendered for this project thus far, particularly from NCDA&CS (for procuring funds and building the hoop structures); to NC State (for the funds provided to hire the position to manage the facility and provide two graduate research assistantships to help initiate the research program), and the NC A&T (for providing support through their alternative swine extension position). We will continue to count on every individual to help this program successfully reach its goals of promoting alternative methods of swine production within and beyond the borders of North Carolina. As the alternative swine production program progresses, we look forward to future collaborations.

–Dr. Harold Anindo Rachuonyo, Alternative Swine Production Coordinator



Above: Construction of hoop house frames;
below: hoop houses after addition of the
roof cover.

1 2. NORTH CAROLINA CHOICES LAUNCHES WEBSITE

The CEFS initiated, Kellogg-funded North Carolina Choices program has launched a new website designed to connect North Carolina consumers with local independent hog farmers using alternative production practices. Encouraging consumers to “make choices that matter,” the site (www.ncchoices.com) allows viewers to find a local farmer in their area producing pasture-raised and/or antibiotic-free pork. Consumers can also find information on how supporting local farmers positively affects the environment, the rural economy, and the very food they put on their tables.

Eleven farmers from all areas of the state are highlighted on the website, with descriptions of their farms, farming practices, and information on how to buy their pork and other products. Over the summer new information and pictures will be added to enhance the site.

Using this site as a reference for consumers, North Carolina Choices will continue to advertise the program to consumers through local media and project partnerships. For more information, contact Susan Mellage at 919-513-7346 or susan_mellage@ncsu.edu.

–Susan Mellage, NC CHOICES Project Manager

CEFS NEWS

13. ORGANIC GRAIN PROJECT UPDATE

There is more and more demand in North Carolina for organic grains as more livestock producers want to go organic and larger mills (Braswell Milling and Lindley Mills) increase production. Organic feed mills in Pennsylvania (and throughout the U.S.) are paying more for organic grains due to the overall increase in production of organic livestock and dairy and the slow-to-catch-up organic grain supply. In the western half of North Carolina, the organic dairy industry is gearing up. A milk processor in Asheville has installed equipment to be able to process organic milk and other processors are strongly considering going organic. To meet the demands of this one processor, a minimum of 300 to 400 organic cows are needed. This means that almost 2000 tons of organic grains and 3000 tons of organic forage (hay) per year will be needed. This is a potentially large and growing market for organic grain farmers in NC.

The NC Organic Grain Project has planned an organic grain and oilseed workshop to be held at CEFS on July 21 from 10 a.m. to 2 p.m. Organic field crops, an organic soybean variety trial, summer cover crop plots and alternative grain demonstration plots will be toured. There will also be a mechanical weeding equipment demonstration. Dr. Gary Bullen of NCSU's Agricultural Resource and Economics Department will present organic corn, soybean and wheat budgets he developed for North Carolina, and time at the end of the program will be available for farmers and agents to talk to crop Extension specialists and organic grain buyers. A planning meeting will be held after the workshop to talk about the next steps in promoting organic grain crop production and developing markets and infrastructure in NC. Pre-registration for the workshop is required by 5 pm on July 15th so there will be enough lunches and materials for everyone. There is no charge for this workshop. Register with Molly Hamilton, Extension Assistant, at (828) 628-2675 or email: molly_hamilton@ncsu.edu. If you wish to attend the meeting after the workshop, please contact Molly as well.

–Molly Hamilton, Organic Grain Project Coordinator

14. CEFS QUARTERLY MEETING NOTES

As the number of activities and people involved at CEFS increases, the unit coordinators are working to provide more opportunities for those most closely involved in CEFS to provide input and feedback on the operation of CEFS. One means of doing so is through quarterly collaborators meetings of CEFS unit coordinators, key CEFS staff, faculty with regular involvement at CEFS, and CEFS-based research technicians/associates and graduate students. The first such meeting was held June 21st at CEFS. The agenda included updates on CEFS Development, the Organic Cropping Systems faculty position, the IGERT proposal, agroforestry programming, and the upcoming wildlife count (as discussed in “From the Director”) and other activities highlighted in this newsletter such as Bryan Green’s radio show, the intern program, hoop house progress, and the NC Choices project. Another initiative introduced to the group was the production of a targeted extension series based on graduate student work that has been completed at CEFS. Nathan McClintock has developed a model bulletin and guidelines for the series. Finally, tropical spiderwort (TSW) was discussed, with concerns raised about communication regarding the protocols to be followed when working on the farm, particularly in the Farming Systems Unit. If you are not aware of the regulations regarding TSW and field activities, please contact the coordinator of the unit on which you are working. If you supervise university staff and student workers, please insure that they are aware of TSW and associated protocols. Updates on TSW locations will be available in the farm office.

The next quarterly meeting will be in September. The date and location of the meeting will be circulated via the CEFS list serve.

–Denise Finney, Newsletter Editor

15. RECENT PUBLICATIONS FROM CEFS RESEARCH

Bertone, M., J. Green, S. Washburn, M. Poore, C. Sorenson, and D.W. Watson. 2005. Seasonal Activity and Species Composition of Dung Beetles (Coleoptera: Scarabaeidae and Geotrupidae) Inhabiting Cattle Pastures in North Carolina. *Ann. Entomol. Soc. Am.* 98(3): 309-321.

CEFS NEWS

Kuminoff, N. and A. Wossink. Valuing the Option to Convert from Conventional to Organic Farming. Invited paper AAEA annual meeting, July 24-27, 2005, Providence, RI.

Tu, C., F.J. Louws, N.G. Creamer, J.P. Mueller, C. Brownie, K. Fager, M. Bell, and S. Hu. 2005. Responses of soil microbial biomass and N availability to transition strategies from conventional to organic farming systems. Submitted to *Agriculture, Ecosystems & Environment*. Accepted.

Wossink, A. and N. Kuminoff, Valuing the option to switch to organic farming: an application to U.S. corn and soybeans, Meeting of the European Association of Agricultural Economist (EAAE), Copenhagen, August 23-27, 2005.

Zhang, W., J. Wu, C. Tu, H. G. Diab, F.J. Louws, J.P. Mueller, N.G. Creamer, M. Bell, M. G. Wagger and S. Hu. 2005. Divergence in soil microbial activity and community structure in six managed ecosystems along a disturbance gradient. *Pedosphere*. In press.

16. JOB OPENING AT CEFS

NC A&T State University is currently accepting applications for the position of research/extension associate based at CEFS in Goldsboro, NC. The successful candidate will be stationed at CEFS engaged in research and extension activities. Major extension duties include: coordinate and conduct workshops and field days, assist with the student organic farm, arrange and lead farm tours, and develop and conduct outreach activities for farmers and for the Goldsboro community. Major research duties include: coordinating/conducting collection of field samples, sample processing, monitor and maintain field equipment, and manage research data including computer processing, statistical analysis and tabulation.

For additional information about this position, contact Dr. Charles W. Raczkowski, Dept. of Natural Resources & Environmental Design, North Carolina A&T State University, at rackzowc@ncat.edu or 336-334-7779.

Congratulations to
Michelle Schroeder & Tomas Moreno on the birth of their son, Miguel,
and to Robyn & James Stout on the birth of their son, Wendell!

17. UPCOMING EVENTS IN SUSTAINABLE AGRICULTURE

July 11, 2005: Organic Pasture Management Workshop sponsored by the Chatham County Center of North Carolina Cooperative Extension *Enhancing Sustainability Workshop Series*. 7:00-9:00 pm at the Agricultural Building Auditorium in Pittsboro, NC. For more information, contact Debbie Roos at Debbie_Roos@ncsu.edu or 919-542-8202.

July 21, 2005: Organic Grain Workshop conducted by North Carolina State University's Organic Grain Project. 10:00 am-2:00 pm at CEFS in Goldsboro, NC. Pre-registration required by 5:00 pm on July 15th so there will be enough lunches and materials for everyone. There is no charge for this workshop. Register with Molly Hamilton at Molly_Hamilton@ncsu.edu or 828-628-2675.

July 28, 2005: CEFS Tour for North Carolina Agricultural Extension agents and farmers.

August 8, 2005: Cut Flower Workshop sponsored by the Chatham County Center of North Carolina Cooperative Extension *Enhancing Sustainability Workshop Series*. 12:00 noon-4:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. For more information, contact Debbie Roos at Debbie_Roos@ncsu.edu or 919-542-8202.

CEFS NEWS

October 16-19, 2005: 4th National Small Farm Conference will be held at the Sheraton Greensboro Hotel in Greensboro, NC. This is a train-the-trainer conference designed to enhance economic opportunities and the quality of life of small farmers and ranchers. For information, visit the conference website:

www.csrees.usda.gov/nea/ag_systems/in_focus/smallfarms_if_conferences_fourth.html

November 4-6, 2005: Annual Sustainable Agriculture Conference sponsored by Carolina Farm Stewardship Association in Durham, NC. Visit the CFSA website for more details:

www.carolinafarmstewards.org.

May 9, 2006: CEFS Swine Unit Dedication and Kick-off Celebration. More details coming soon.

Additional information about these and other programs can be found at:

www.ces.ncsu.edu/chatham/ag/SustAg/index.html

www.carolinafarmstewards.org/calendar.html

www.cefs.ncsu.edu

18. THE ART OF FARMING

(contributed by Joel Gruver)

Living earth

Henry David Thoreau, Walden

The earth is not a mere fragment of dead history,
stratum upon stratum like the leaves of a book,
to be studied by geologists and antiquaries,
but living poetry
like the leaves of a tree,
which precede flowers and fruit -
not a fossil earth,
but a living earth;
compared with whose great central life
all animal and vegetable life is merely parasitic.

CEFS News is the quarterly newsletter of the Center for Environmental Farming Systems in Goldsboro, NC, and is edited by Denise Finney, denise_finney@ncsu.edu. The next edition of CEFS News will be published October 1, 2005; the submission deadline is September 15, 2005.

Suggestions for a catchy newsletter name are still being accepted!