

Plow Sharing

September-October 2006

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North Carolina Cooperative Extension
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A bi-monthly newsletter promoting awareness, understanding, and practice of sustainable agriculture



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I hope you find this newsletter helpful and informative. If you have ideas or suggestions for future issues, call or stop by the office. I always welcome your feedback!

Debbie Roos
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Agriculture
919-542-8202
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Register Now for Pastured Poultry Production Conference

September 25, 2006
Pittsboro, NC



Our 2005 Pastured Poultry Conference was such a success, we have planned two more for 2006! Everyone I talk with agrees that demand for sustainably raised pastured poultry exceeds supply in our area, so come learn about opportunities to meet the growing demand for quality locally grown poultry.

The 2005 pastured poultry conference sold out and we had to turn people away, so if you plan on attending, send in your registration early. We must receive your registration by September 15 to guarantee that you will receive a resource notebook.

Note: I didn't get this newsletter out as soon as I had hoped, so if you plan on attending, mail your check right away and also call 919-542-8202 to let us know you are coming. That way we can prepare enough materials.

The Chatham County Center of North Carolina Cooperative Extension presents a Pastured Poultry Production Conference from 9:00 a.m.-5:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. Learn all about forages for pastured poultry, sustainable pasture management, rotational grazing, and multispecies grazing. Get an update on the avian flu situation and how you can educate your customers proactively. We'll also talk about biosecurity strategies and marketing opportunities. A one hour open discussion period will provide opportunities to get your burning questions answered!

We will also be offering an all-day pastured poultry conference on December 1, 2006. The December conference will focus on the nuts and bolts of production including breed selection, brooder management, housing, fencing, predator control, feeding, watering, and much more. Details will be released in October.

Now is a great time to be preparing to plant forages for next year, and gearing up for 2007 production. The agenda for the September conference is on page 2 of this issue.

Agenda for Pastured Poultry Conference:

8:30-9:00 am
Registration

9:00-9:10 am
Welcome and Introductions
Debbie Roos, North Carolina Cooperative Extension, Chatham County Center

9:10-9:40 am
The Role of Forages in Pastured Poultry Systems
Noah Ranells, Orange County Agriculture Economic Development Coordinator, Fickle Creek Farm

9:40-10:20 am
Pasture Management
Sam Groce, North Carolina Cooperative Extension, Chatham County Center

10:20-10:30 am
Break

10:30-10:50 am
Nutrient Management in Pastured Poultry Systems
Ruth McDaniel, North Carolina State University, Soil Science Department



10:50-11:20 am
Cool-season Forages
Sam Groce, North Carolina Cooperative Extension, Chatham County Center

11:20-11:50 am
Warm-season Forages
Sam Groce, North Carolina Cooperative Extension, Chatham County Center

11:50-12:20 pm
Rotational Grazing
Sam Groce, North Carolina Cooperative Extension, Chatham County Center

12:20-1:00 pm
Lunch featuring locally grown foods prepared by Celebrity Dairy

1:00-1:30 pm
Multispecies Grazing
Noah Ranells, Orange County Agriculture Economic Development Coordinator, Fickle Creek Farm

1:30-2:30 pm
Avian Influenza: What You Should Know
Dr. Donna Carver, Poultry Veterinarian Specialist, North Carolina State University

2:30-3:00 pm
Biosecurity Strategies on the Farm
Dr. Mary Ann McBride, Program Development Veterinarian, NCDA&CS Veterinary Division

3:00-3:15 pm
Break

3:15-3:45 pm
Marketing Opportunities for Pastured Poultry
Alex Hitt, Peregrine Farm, Growers' Choice Cooperative

3:45-4:00 pm
Resources for Pastured Poultry Producers
Debbie Roos, North Carolina Cooperative Extension, Chatham County Center

4:00-5:00 pm
Open Questions & Answers

Participants will receive a resource notebook. The cost of the workshop is \$25 to cover lunch and materials. The deadline for registration is September 15. We must receive your registration fee by then to guarantee your spot. To register, download a registration form at <http://chatham.ces.ncsu.edu/growingsmallfarms/workshops.html> and mail to Debbie Roos at P.O. Box 279, Pittsboro, NC 27312. Call 919-542-8202 for more information.

Update on Growers' Choice Poultry Growers' Cooperative

Editor's note: For the back-story on this cooperative, see the January-February 2006 Plow Sharing on the Growing Small Farms website at <http://chatham.ces.ncsu.edu/growingsmallfarms/psindex.html>.

From the Growers' Choice Cooperative Board of Directors

After operating the Pittsboro plant for eight months we gained a lot of experience and information. Since early June, the current Growers' Choice Board of Directors developed an action plan to help the cooperative attain its mission of serving local independent producers of poultry and rabbits by providing processing and other services. These planned services include, among others, purchases of feed, chicks, training and marketing. In addition, we were prepared to lease the Pittsboro facility from the property owners (Sueno, LLC) through the end of the year to ensure that the community of independent producers could get their birds and rabbits processed. Sueno, LLC declined our lease offer, and has begun to operate the processing facility under the name J.B.F. Processing. We are pleased that there will still be a plant available for small independent producers, because this has been the number one priority for Growers' Choice since its inception.

In July, Growers' Choice was contacted by Mr. Abdul Chaudhry of Chaudhry Halal Meats (CHM) in Siler City about his plans to build a new poultry processing facility adjacent to his existing business. CHM is a well-established USDA inspected plant that has been processing beef, sheep, and goats

for ten years and has a very good reputation among producers who use their services. Following several very positive meetings between Growers' Choice and CHM, Growers' Choice decided to not purchase the Pittsboro plant and to develop a working relationship with this new processing opportunity. Growers' Choice and CHM have verbally agreed to allow Growers' Choice input and collaboration opportunities on plant design as well as the needs and services that enhance products from small independent growers and direct marketers. Growers' Choice and CHM will formalize the collaboration in a Memorandum of Understanding to be signed by both parties. In addition, Growers' Choice seeks to ensure access to the plant by our members and other interested growers. By collaborating with CHM, we not only gain access to a new state of the art plant, but also a business that has vast experience in the details of operating a USDA-inspected plant. This will enable Growers' Choice to focus on creating a business plan that can provide other, much-needed, services to independent producers, such as equipment, chicks, feed, and marketing for those who don't sell direct to their own customers.

In the coming weeks and months, Growers' Choice will revise and complete the current action plan. The Growers' Choice Board of Directors seeks to collaborate with willing partners to provide much needed services for independent producers.

We look forward to hearing from and working with you all in the coming months to ensure that the needs of small independent producers are met.

Pittsboro Poultry Processing Plant under New Management

The USDA-inspected poultry processing plant in Pittsboro that processes poultry and rabbits for independent producers is under new management. The business is now called JBF Processing. Please call ahead to schedule your processing day and time. I'm told their prime turkey processing days are filling up fast, so call now to schedule an appointment. Their contact information is provided below.

JBF Processing
 Phone: 919-742-6584
 Fax: 919-742-3152
 themoize@msn.com
 2305 Jay Shambley Rd.
 Pittsboro, NC 27312

2007 Beekeeping School

September is **National Honey Month**, so it's a great time to announce that the Chatham County Beekeepers' Association, in conjunction with the Chatham County Center of North Carolina Cooperative Extension, will be offering a Beekeeping School this coming winter! The 8 week course will be held on Monday evenings from 7:00-9:00 pm in January and February at the Agricultural Building Auditorium in Pittsboro, NC. Details will be released soon.



D. Roos

I became a beekeeper this year and I must say it is such a rewarding hobby! If you love nature and insects you will find it fascinating. Come see what it's all about at the upcoming beekeeping school.

For more information about the Chatham County Beekeepers' Association, call 919-542-8202 or visit the GSF website at <http://chatham.ces.ncsu.edu/growing-small-farms/beekeeping.html>.

You can celebrate National Honey Month by buying local honey at Chatham Marketplace in Pittsboro. Visit the CM website at www.chathammarketplace.com. The local honey is supplied by members of the Chatham County Beekeepers' Association.

Farmer-to-Farmer Cut Flower Mentoring Program

Chatham County farmer Cathy Jones of Perry-winkle Farm mentored a group of cut flower growers this summer on her farm as part of a Farmer-to-Farmer Mentoring program supported by North Carolina A&T State University and the Chatham County Center of North Carolina Cooperative Extension.

The group of 20 growers from all over the Piedmont region came to Perry-winkle Farm for 7 three-hour classes starting in June. Participants learned about the nuts and bolts of cut flower production and marketing, including crop planning, supply sourcing, planting & harvesting, postharvest handling, record-keeping, marketing, tracking costs and profits, and much more.

Participants received a resource notebook full of handouts and supplemental readings. I created a listserv, or email discussion group, so that we could talk to each other throughout the course. The listserv has been a great way to ask about diseases, varieties, postharvest handling issues, and all the other burning questions that pop up throughout the growing season. If you are a cut flower grower and would like to join the listserv, email me at debbie_roos@ncsu.edu and ask to subscribe to the cut flower list.

Cathy is one of our area's most experienced and successful cut flower growers, so this was an excellent opportunity to learn from an expert.

I was very impressed by Cathy's dedication and preparation. She proved to be a fantastic teacher, and freely shared the lessons she had learned along the way.

I wasn't the only one who was impressed. Below are some comments from participants:

"It was an excellent workshop. Obviously Cathy knows her stuff. But it was her enthusiasm about sharing her knowledge that made the workshop such a success."



"I learned many things from her and the other participants. There are two things that stick out in my mind because they are helping me now. One is scheduling of spring flower production. Yesterday I used my notes to sort through my seed box and decide what to plant now, what to plant next month and what to wait and plant early next year.

Her discussion of floral preservatives was also a big help. I now use her formula for homemade floral preservative when I cut flowers for market. But more than that, I have a better understanding of the role of pH, sugar and biocide in the formula, and how to adjust it for various species of cut flowers. Thanks Cathy and Debbie!"

"I found the course very helpful. Cathy was a wonderful mentor who freely shared her knowledge and expertise. In addition, she conveyed to all present that she wanted them to succeed in their endeavor to grow and market cut flowers."

"We are very grateful for the opportunity to participate in the cut flower course. The three hour drive was worth it. Having more than one of us participate has stirred valuable discussion that will only improve our flower and farm production. The listserv is extremely helpful as no one can be as productive alone as they are in a team. Thank you and Cathy for all your shared efforts!"

"Cathy is a wonderful mentor - positive, encouraging and generous in sharing her experience and expertise. One particular handout I have used frequently is the planting schedule for the various varieties of flowers. This is a tremendous help in planning for continuous bloom throughout the season. Also, the resources - both handouts and people in class - have saved me lots of legwork and have made it possible for me to spend more time in the field rather than at the computer! Thanks again for an invaluable experience."

"I don't know where to start with my praise for you and Cathy and also for all the members of the group. Having almost not made the cut because of the class size and getting in late made me appreciate the class even more. I have found my resource book that you put together for us invaluable. I am sure it will have worn pages in the years to come. Thanks for that!! Having only 3 years under my belt growing flowers it was quite an opportunity to have access to Cathy's many years of experience as a cut flower producer and vegetable grower. Just knowing now that if I or any one has a problem that we have the listserv to bounce it around and get a quick answer is great. What a resource you all are....glad to have met you all!!"

Cathy's role as a mentor doesn't end now that the course is over. She will continue to provide technical support for participating growers as needed throughout the year 2007.

The cut flower mentoring program will culminate in a field day on September 18 from 5:30-8:00 pm at Perry-winkle Farm in northern Chatham County. See the article below for details.

This training was part of North Carolina A&T State University's Farmer-to-Farmer Mentoring Project. The Chatham County Center of North Carolina Cooperative Extension collaborated with Cathy to provide logistical and technical support for the program.

Field Day: Sustainable Cut Flower Production

September 18, 2006
Perry-winkle Farm

We will have a field day on Monday September 18 to showcase the Farmer-to-Farmer Cut Flower Mentoring Program that was held this summer at Perry-winkle Farm in northern Chatham County (see article above).



The program will start at 5:30 pm and finish by 8:00 pm. Participants will learn about the Mentoring Program and meet some of the farmer participants, then farmer Cathy Jones will give a talk on "Sustainable Cut Flower Production, from Seed to Market". The field day will include a Twilight Tour of Perry-winkle Farm to give visitors an opportunity to see field production of cut flowers.

Please RSVP if you plan on attending by calling 919-542-8202.

This is BYOC – bring your own chair (or blanket)!

This field day will offer something for growers of all levels – and I suspect it will also be a great opportunity for networking and hobnobbing! We hope to see you there.

For more information, call Debbie Roos at 919-542-8202.

Directions to Perry-winkle Farm (but don't forget to RSVP!):

From Chapel Hill/Carrboro: take Jones Ferry Rd. out of town, head south about 8 miles to Frosty's Store, take a right onto Crawford Dairy Rd, go 1/2 mile, take first right onto White Cross Rd, go 1 mile. Perry-winkle Farm is on your left. Look for plastic flowers on the mailbox.

From Pittsboro: take Hwy 87 north to Chicken Bridge Rd (approx 7-8 miles), go right onto Chicken Bridge Rd, cross the Haw River and go to the stop sign, go right onto Crawford Dairy Rd. and take first left onto White Cross Rd. Go 1 mile and Perry-winkle Farm is on your left. Look for plastic flowers on the mailbox.

Local Farmers Win National Sustainable Agriculture Award



Local farmers Alex and Betsy Hitt of Peregrine Farm last night received the SARE Patrick Madden Sustainable Agriculture award at the national SARE conference in Wisconsin (<http://www.sare.org>).

We are all so proud of them! I first met Alex and Betsy many years ago, long before I came to North Carolina. I was a graduate student at the University of Florida and I met them at a Southern SAWG conference, an annual sustainable agriculture conference (for more info on SAWG, visit their website at <http://www.ssawg.org>) that is held around the south.

I was so impressed by what Alex and Betsy were doing at Peregrine Farm that I knew North Carolina must be a great place to live and work if it had farmers like the Hitts. I was not mistaken!

Alex and Betsy have been farming for 25 years and their leadership has helped to create a thriving community of small farms in our area. Both of them are also known for their generosity in sharing their time and expertise with other growers and organizations and this has helped expand interest, enthusiasm, and practice of sustainable agriculture.

You can read all about the award and see **photos of Alex and Betsy and Peregrine Farm** on the Growing Small Farms website at <http://chatham.ces.ncsu.edu/growingsmallfarms/hittSAREawarda.html>

The other exciting news is that Alex was featured on National Public Radio's All Things Considered yesterday afternoon! It was a great interview that aired nationally. You can download the audio and listen to it any time from NPR website—linked from the GSF web page above.



Congratulations Alex and Betsy, and thanks for all you do!

New Stuff on the Growing Small Farms Website

You'll find lots of new **Farm Photos** at <http://chatham.ces.ncsu.edu/growingsmallfarms/farmphoto.html>, including

- Beekeeping Field Day
- "Fancy Friday" at Perry-winkle Farm
- Summer Critters on the Farm
- Sweet Corn from Roberson Farm
- End-of-Season at Sunny Slope Greenhouses
- Pick-your-own Blueberries at Ayrshire Farm
- Stunning Daylilies at Holly Hill Daylily Farm
- Salad Bar for Pastured Chickens at Castle Rock Gardens
- Cool-season Cover Crops at Harland's Creek Farm
- Berries, Flowers, and 'Maters at Wild Hare Farm
- Early Spring Crops at Maple Spring Gardens
- Sliding High Tunnels at Peregrine Farm
- Cooperative Seed Potato Order at Perry-winkle Farm

See a sample of these photos on page 14 of this issue.



Check out the new **Local Crop Problems** at <http://chatham.ces.ncsu.edu/growingsmallfarms/cropproblems.html>.

Perry-winkle Farm Profile Now on the Web!

I completed another Local Farm Profile, this one featuring Perry-winkle Farm in northern Chatham County. Perry-winkle is owned by Cathy Jones and Mike Perry. They grow many varieties of vegetables, herbs, cut flowers, and also raised pastured layers and direct market through the Fearington and Carrboro Farmers' Markets.

Check out the farm profile on the Growing Small Farms website at <http://chatham.ces.ncsu.edu/growingsmallfarms/perrywinklefarm.html>

The profile features over **100 photos** of Perry-winkle through the seasons and shows all aspects of their production, from transplant production, to soil management, to planting, cut flower production, pest management, pastured poultry production, harvesting, postharvest handling, and more!

Several more profiles are in the works, so keep your eyes on the "What's New" section of the Growing Small Farms website.

Tip: want an easy way to get to the GSF website? Just "Google" the phrase *Growing Small Farms* and the very first link will take you right there.

Selling Eggs, Meat and Poultry in NC: What Farmers Need to Know



Every year I get questions from farmers about selling eggs, meat, and poultry at farmers' markets and to restaurants, retailers, and other outlets. At a spring producer meeting for Chat-

ham Marketplace we had many questions about the rules and regulations surrounding the sale of eggs and meat. So, in an attempt to answer these questions, I created a new web page that I hope you will find helpful: Selling Eggs, Meat, and Poultry in North Carolina: What Farmers Need to Know. You will find it at <http://chatham.ces.ncsu.edu/growingsmallfarms/meatandeggs.html>.

This web page explains what producers must do to get eggs ready for sale, and explains the exemption for small-scale producers. It also describes the regulations governing the transport and sale of meat and poultry and explains how to get registered as a meat handler. It also describes the on-farm processing exemption for small-scale producers.

And speaking of processing, the web page also lists several meat and poultry processors in the state.

Please let me know if this web page is helpful or if there is something I can do to make it easier to understand. Did I omit anything? Does it answer all of your questions? Send questions or comments to me at debbie_roos@ncsu.edu.

Potluck in a Pasture

September 17, 2006

ChathamArts 'Potluck in a Pasture' at Perry-Winkle Farm: Visual and performing artists and home-grown food

Meet local artists and visit a farm as part of ChathamArts "Potluck in a Pasture" series of Sunday evening picnic suppers. The series celebrating local farmers and artists continues Sunday Sept. 17 from 6:00 to 8:00 p.m. at Perry-winkle Farm, owned by Cathy Jones and Michael Perry, in north Chatham County. Participating artists include award-winning director/actor Ellen Bland ("The Millworker"), watercolorist El Tremblay, stained glass artist Luna Mountainsea, furniture and guitar maker Paul Harrell, graphic artist Emma Skurnick and acoustic musicians Jordan Puryear and Rae Bland.

Visitors are invited to bring a pot-luck dish for eight that includes at least one locally grown ingredient (and the recipe to share stating the origins of its local ingredients), as well as a beverage, a lawn chair or blanket, and a \$10 donation to ChathamArts, the non-profit county arts council.

Proceeds will benefit the Public Art Program. For directions and additional information, visit the ChathamArts website at www.chathamarts.org.

Local food ingredients for your pot-luck contribution to the supper may come from your own backyard or neighboring farms; from local farmers' markets at the Chatham County Fairgrounds (Thursdays), Fearington Village (Tuesdays), Southern Village (Thursdays) and Carrboro (Wednesdays and Saturdays), or from Chatham Marketplace in Pittsboro and Weaver Street Market in Southern Village and Carrboro. The supper will be cancelled if the weather is bad (call 967-3716 to check after 1:00 p.m. on Sept. 17).

ChathamArts presents and promotes the arts through the schools and community, cultural events throughout the year, and exhibits and sales of local artists' work at ChathamArts Gallery in historic downtown Pittsboro. The gallery is located at 115 Hillsboro Street and open Wednesday-Saturday from 11:00 am to 5:00 pm and every First Sunday from 12 noon to 5:00 pm. For more information, visit their website at www.chathamarts.org or call 919-542-0394.

CEFS Fall Festival: Celebrating Sustainable Agriculture in NC

Saturday, September 16, 2006

10:00 am-4:00 pm

Goldsboro, NC

Rain or Shine

Admission and parking for this event are free.

Exhibits - Learn about organic and sustainable farming, home gardening, small farm equipment, healthy eating, and more through exhibits hosted by extension offices, university faculty and staff, non-profit organizations and other agricultural organizations in North Carolina.



Kids' Activities - Children of all ages will enjoy hands-on agricultural activities including games, crafts, and a sorghum maze (a close relative to the corn maze!).

Demonstrations - Learn how to build your own home compost bin, watch a flame weeder in action, or visit a field demonstration of cover crops. Local experts will offer hourly demonstrations on topics of interest to farmers and home gardeners.

Live Music - Enjoy live music from North Carolina bluegrass bands Constant Change and the Back Porch Boys.

Farmer's Market - Purchase farm fresh products from local farms at the Festival Farmer's Market.

Farm Tours - Tours of the CEFS farm will be offered throughout the day. Tour stops include the pasture-based dairy and beef facilities, swine hoop houses, and cropping system research areas.

Food & Refreshments - Food & drinks will be available for purchase all day. Perfect for a picnic under the trees!

Week of Sustainable Agriculture - The Fall Festival is the first in a week of events celebrating sustainable agriculture in North Carolina.

To learn about **upcoming workshops at CEFS**, see the Calendar section on page 15 of this issue.

Questions? Contact CEFS at cefs_info@ncsu.edu or 919-513-0954. For directions and more information, visit the CEFS website at <http://www.cefs.ncsu.edu/fallfestival.html>.

Chatham Marketplace Producer Potluck

September 19, 2006

Chatham Marketplace will host a Producer Potluck from 6:00-8:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. This will be a casual gathering to share our stories about buying local products, what is working, and to let producers know about the products Chatham Marketplace wants to source from the region. This will also be an opportunity for CM staff to get input on how to strengthen their relationship with growers and producers in the region. For more information, call Chatham Marketplace at 919-542-2643.

21st Annual Sustainable Agriculture Conference

“Gathering the Ingredients for a Sustainable Food System”

October 27-29, 2006
Spartanburg, SC

From the CFSA website:

The Sustainable Agriculture Conference (SAC) is Carolina Farm Stewardship Association’s primary educational and inspirational event. Over the past 21 years, the SAC has emerged as a catalyst for change in developing a local and organic food community through providing valuable resources for new and practicing organic and sustainable farmers, researchers, consumers, educators, gardeners, extension agents and local food advocates. This community springs forth from the lively exchange of information and experiences between conference participants and sustainable agriculture experts from across the country and especially the Southeast.

Every year we choose a theme intended to provide a focus for the conference and define where we are in our journey of creating a sustainable agriculture system for the Carolinas. This year’s theme, “Gathering the Ingredients for a Sustainable Food System” focuses our attention on the many ingredients that go into the recipe of a food system that is good for our families, our farmers, and our environment; soil, water, seed, farmers, infrastructure, and consumers. We’ve reached a new plateau where the organic movement has moved from a

niche market to a mainstream industry. Food awareness among consumers has skyrocketed and is reflected in both increases in local farmers’ markets and CSAs as well as Walmart announcing a major focus on organics. Global warming and peak oil prices are forcing our society to address a food system based on energy derived from petroleum. We’ve built a solid foundation or mixing bowl for our vision of a sustainable food system and it is now time to gather the ingredients, mix them together, and share in the communal meal we all desire and deserve.

Conference Highlights

- Keynote Speakers: Mark Kastel (Friday night) and John Ikerd (Saturday night)
- Farm Tours (Friday, October 27)
- Organic Certification Workshop (Friday, October 27)
- Farmer Workshops
- On-going Activities (exhibits, seed exchange, meals, silent auction, poster session)
- Contra Dance
- Food & Farming Film Festival
- Swappin’ Stories with Gaines Steer

Complete conference details are available on the CFSA website at <http://www.carolinafarmstewards.org/calendar/SAC2006/SAC2006.html>. Call 919-542-2402 for more information.

Time to Plant Cool-season Cover Crops!

September and October are ideal for planting cool-season cover crops in the Piedmont that will provide many benefits to next year’s cash crops. Cover crops can help reduce soil erosion, conserve soil moisture, and improve soil fertility and overall soil health. They can help control weeds, insects, diseases, and nematodes.



D. Roos

Winter legume cover crops for the Piedmont region include crimson clover, hairy vetch, Austrian winter pea, subterranean clover, faba bean, and other clovers (annual white sweetclover, yellow sweetclover, berseem clover, white clover).

Winter non-legumes for our region include cereal rye, winter wheat, oat, annual ryegrass, barley, mustard, and rape.

Need help knowing what to plant, how to plant, when to plant,



D. Roos

how to manage? Cooperative Extension’s Growing Small Farms website has an entire section devoted to cover crops. Regular visitors to the GSF website will find several new sections!

This is what you'll find:

- Cover Crops: Benefits and Challenges
- Selecting Cover Crops
- Cover Crops for Organic Farms
- Winter Cover Crops for North Carolina
- Summer Cover Crops for North Carolina
- Peregrine Farm's Estimated Planting Dates for Piedmont North Carolina
- Local Soil Management Profiles from Peregrine Farm and Maple Spring Gardens
- Sources for Untreated and Certified Organic Cover Crop Seeds
- Cover Crops for Organic No-till Vegetable Production
- Web Resources

Go to the GSF website at <http://chatham.ces.ncsu.edu/growingsmallfarms/covcropindex.html> to learn more about cover crops appropriate for your farm.

The Sustainable Farming Program CCCC, Pittsboro Campus

Fall 2006

Call 919-542-6495 ext. 223 to register.

MONDAY

Whole Farm Planning: with Livestock and Trees – Instructor Ben Bergmann. The components of a sustainable farm are all part of a system. This course is designed to help you look at various enterprises on the farm and see how they are integrated into a system that has minimum impact on the environment, is sustainable, and includes humane treatment for the animals. Using Fickle Creek Farm as an example, the course will focus on components of an integrated farm system and the natural resources management appropriate for the piedmont of NC. Field trip TBA. 9/11/06 to 10/16/06, 6:00-8:00 pm.

TUESDAY

Organic Farming – Instructor Tony Kleese. This six week intensive course is for individuals considering starting a commercial organic vegetable farm. Students will learn the components of a farm business plan, farm design and infrastructure, evaluating and amending soils, biological pest, disease, and weed management, record keeping, organic certification, harvesting and marketing. Consisting of class and field time, students will gain hands-on practical experience in planting and harvesting organic vegetables. 10/10/06 to 11/14/06, 6:00-9:00 pm.

Carpentry, Electrical and Plumbing - Instructor Kevin Meehan. Students will learn the fundamentals for basic house construction or remodeling work from experienced builder, teacher and farmer Kevin Meehan. Topics covered include framing, cabinetry and trim, stairs, wiring, drain

lines, the NC building code, and hot/cold supply lines with an emphasis on sustainable and low impact building techniques. Excellent course for those new to the construction trades. 9/19/06 to 12/5/06, 7:00-9:00 pm.

WEDNESDAY

Composting: Recycling Organically – Instructor Brian Rosa. This course will cover the basic topics on how to compost (hot/fast, cold/slow). Vermi-composting, utilizing the 'red wiggler' worms to decompose or consume your organic waste. How to utilize compost as a soil amendment as well as compost tea brewing and application also included. Students will build and maintain a compost pile throughout the course. 9/13/06 to 10/11/06, 6:30-9:00 pm.

THURSDAY

Exploring Sustainable Vineyards – NEW! – Instructor Robin Kohanowich. This short course will call on the local resource people in the grape growing and wine production business as we investigate sustainable grape production possibilities for Piedmont growers. Growers will share their personal "how I got started" stories and we will learn about some of the particular challenges that face Piedmont growers. We will also look at alternative markets and marketing strategies for grape products and by-products. 9/21/06 to 10/26/06, 7:00-9:00 pm.

Wild Medicinal and Edible Plant Exploration – Instructor Will Endres. The focus of this field study will be locating, identifying, approaching, collecting and marketing edible and medicinal plants. Frequent field trips to local areas for identification and sustainable harvest of native plants are planned as part of the learning experience. Learn how to explore herb habitats and communities, and discover ways to open up to this healing, nurturing, and renewing force. Most of the class will take place outdoors, so come dressed accordingly. Students should bring a notebook suitable for use outdoors. Pre-requisite: prior training with Will or permission from instructor. 9/07/06 to 12/07/06, 9:00 am-4:30 pm.

For information on Sustainable Agriculture Curriculum courses call Robin at 919-542-6495 ext. 229. To register: call 919-542-6495 ext. 223. Visit their website at http://www.cccc.edu/Programs/Sustainable_Agriculture.html.



D. Roos

Eastern Triangle Farm Tour

Featuring 10 Farms
in Wake, Franklin & Granville Counties!

September 23-24, 2006
1:00-5:00 pm

Join Carolina Farm Stewardship Association (CFSA) and Whole Foods Market for the 1st Annual Eastern Triangle Farm Tour. Discover Triangle farms that are providing delicious produce and meat right here, whereas the average food item travels over 1500 miles before reaching your dinner plate. Buying and eating locally produced foods decreases the use of fossil fuels (thus pollution) while preserving the nutritional value and taste of the food your family enjoys. We invite you to tour some of these local farms and learn more about the system of sustainable agriculture in the Carolinas. Have fun in the country with your family and friends while helping to support a sustainable food system.

By touring local farms, you'll get an up-close and personal look at sustainable pasture-based livestock practices and learn how local farmers are growing vegetables and fruits using organic and sustainable methods. Make it a learning experience for the whole family; farms with child appeal are denoted in this brochure! So fill up your car with family and friends – you'll save money by carpooling! – and start learning how you can support the local sustainable agricultural endeavors in your own neighborhood!

- **Brinkley Farms**—Creedmoor—vegetables, pigs, cattle
- **New Light Farm**—Wake Forest - cattle, woodcrafting
- **Melvin's Gardens Herb Farm**—Rocky Ford—tomatoes, culinary herbs, vegetables
- **Shiloh Farm & Retreat**—Louisburg—turkeys, chickens, honeybees, produce
- **Mae Farm**—Louisburg—cattle, pigs, chickens
- **Freedom Farms**—Louisburg—cattle
- **Vollmer Farm**—Bunn—strawberries, blueberries, vegetables
- **Double T Farm**—Garner—fruits, vegetables
- **Hilltop Farm**—Willow Springs—organic produce, horse boarding
- **Avillion Farm**—Apex—sheep, goats, rabbits

Download the farm tour brochure at http://www.wholefoodsmarket.com/products/locallygrown/south/NC_farmtourbrochure.pdf for complete details on where to buy your farm tour button, farm descriptions and maps, etc. Contact CFSA at 919-542-2402 for more information.

This tour has been made possible by a grant from NC State University and NC A&T Cooperative Extension Service - specifically the Agriculture and Natural Resources/Community and Rural Development offices, as well as the generous support of Whole Foods Market.

Grand Opening of Piedmont Biofuels Industrial Facility

September 25, 2006
Pittsboro, NC

The following article is adapted from Lyle Estill's blog (see <http://biofuels.coop>).

Piedmont Biofuels invites everyone to the grand opening of their Industrial facility in Pittsboro at 6:00 pm on September 25th, 2006.



Building 3 where biodiesel is manufactured (above).

The event is open to members and non-members alike, and is intended to be a celebration of locally made fuel that will power a local community. Everyone in town is invited to attend.

The Grand Opening celebration will be held at the Industrial location, which is on the east side of Pittsboro at the end of Lorax Lane, at the end of Industrial Drive. Industrial Drive forms a "T" intersection with Highway 64 Business across from the Pittsboro Farm and Garden shop. The address for the Industrial facility is 547 Industrial Drive.

Piedmont Biofuels has been making biodiesel at its coop facility in Moncure for years, however they have not been permitted to sell their own fuel for on-road use (they have been selling B100 – or pure biodiesel - fuel made from waste vegetable oil at several locations around the Triangle for years, but this is not fuel that they made themselves).

Terminal where larger trucks will come to fill up (right).

The Industrial facility will change all that. Piedmont Biofuels joined the National Biodiesel Board in August—one of the





regulatory requirements for the sale of on-road fuel. At their on-site laboratory, they will be able to perform the necessary quality control to ensure that the fuel coming out of their facility meets the ASTM specification for biodiesel fuel. Today Piedmont Biofuels imports biodiesel from faraway places like Iowa, and Florida. Once the Industrial plant is on-line the importation step will be eliminated and the fuel will be made in Pittsboro.

(above) 12,500 gallon tank where finished product is stored.

If you plan on attending the Grand Opening, please RSVP by September 15 to tami@biofuels.coop or 919-321-8260. For more information, visit the Piedmont Biofuels website at <http://biofuels.coop>.

Piedmont Biofuels' mission is to lead the grassroots sustainability movement in North Carolina by using and encouraging the use of clean renewable biofuels.

Local Biofuel Advocate Earns Hot Honor



Rachel Burton (left) from Piedmont Biofuels in Pittsboro was recently named to the Real Hot 100 list: <http://thereal-hot100.org>.

The story aired on NBC 17 on Monday's news - you can see the video clip and read the article at <http://www.nbc17.com/station/9751316/detail.html#>

www.nbc17.com/station/9751316/detail.html#

The REAL hot 100 is a list featuring young women from around the country who are breaking barriers, fighting stereotypes, and making a difference in their communities or the nation.

From the REAL Hot 100 website - <http://therealhot100.org/>:

What makes her REALLY hot?

[A photo on the REAL Hot 100 website shows] Rachel filling up Willie Nelson's tour bus with biodiesel (right) sold by Piedmont Biofuels Co-op, co-founded and directed by this REALLY hot woman. The mission of PBF is "to lead the grassroots sustain-



ability movement in North Carolina by using and encouraging the use of clean, renewable biofuels." Rachel can teach you how to make biodiesel, how to convert your car to run on straight vegetable oil, and how to fix your car too. Rachel is a mechanic, former union organizer, belly dancer, and was one of the co-founders of the Chapel Hill chapter of Food Not Bombs. She has also taught automotive technology, and sustainable building and agriculture and has traveled to agricultural conferences and led workshops on cob/bale building.

To learn more about Piedmont Biofuels, visit their website at <http://biofuels.coop/>

Congratulations Rachel! I have always admired your knowledge, skills, passion, and dedication - you are a wonderful role model and I'm sure this much-deserved recognition will inspire others! Thanks for what you do.

The Use of Commercially Available Beneficial Insect Habitat for Sustainable Insect Pest Management

David Orr, Mike Linker, and Lisa Forehand
North Carolina State University

Editor's Note: I collaborated with David, Mike, and Lisa on two on-farm research projects in Chatham County. David helped me to understand the complexity of plant-insect interaction, and how important it is for researchers to design experiments that look at the end result of habitat conservation.

These five critical questions are important to consider:

1. Does the plant attract the appropriate beneficial insect? Does it also attract pests and diseases or *enemies of natural enemies*? Research has shown that some cover crops *increased* the population of parasitoids of beneficials.
2. Does the plant provide enough resources to actually improve the fitness of the beneficial?
3. If the beneficial is attracted to the plant, does it then move

into the crop or is the refuge so appealing that it acts as a natural enemy sink?

4. If the beneficial does move into the crop, does predation or parasitism actually increase? Does the timing of beneficial movement to the crop coincide with the pest outbreak?
5. Does crop damage get reduced to an acceptable level?

Just because a habitat attracts beneficial insects doesn't mean that the beneficials will actually help control pests in the cash crop. This is important. As a gardener, I spend lots of time and money planting a garden that will attract all kinds of beneficial insects because I enjoy studying and photographing them. No problem there. But as an Extension agent, I need to be able to recommend a pest management strategy that will be effective and make economic sense for farmers. That's why this research is so valuable.—
Debbie



Bees on *Helianthus*.



Echinaceas like this 'Razzmatazz' cultivar attract many species of beneficials.

The article below presents a summary of the following publication: Forehand, L.M., D.B. Orr and H.M. Linker. 2006. Evaluation of a Commercially Available Beneficial Insect Habitat for Management of Lepidoptera Pests in Organic Tomato Production. *J. Econ. Entomology*. 99: 641-647.

A pdf file of this article can be accessed from the following web address: <http://puck.esa.catchword.org/vl=2103417/cl=13/nw=1/rpsv/cw/esa/00220493/v99n3/s8/p641>

For centuries, farmers have relied on beneficial insects to help control crop pests. Beneficials play a particularly important role in organic agriculture. As a result, organic

growers are very interested in methods to conserve and enhance populations of beneficial insects on their farms. One method growers use is to plant habitat that provides resources such as food and shelter needed by beneficial insects. The intended result is an increase in beneficial insect populations and a decrease in pest insect numbers.

Before we discuss planting habitat plots on farms, it's useful to reflect on the existing features of small North Carolina farms that have very important impacts on natural enemy populations.



These features are particularly emphasized on organic farms:

1. **Pesticide Use.** If pesticides are used on organic farms, they are typically not as toxic and not as broad-spectrum (or indiscriminate) as those used in conventional farming operations. This alone goes a long way to conserve existing populations of natural enemies.
2. **Sources for Natural Enemies.** Forests and other natural vegetation surrounding fields and farms act as sources for populations of natural enemies that will colonize crop fields. Research in Europe has shown that if there is not enough natural vegetation present in a landscape, farmers lose the services provided by beneficial insects, including natural enemies and pollinators.
3. **Small Field Size.** Research has shown that natural enemies are far more effective at attacking pest insects in small versus large fields. Small fields, or crop plantings, are usually the norm on North Carolina organic farms.
- 4) **High Crop Diversity.** Research has also demonstrated that vegetation diversity increases the abundance of natural enemies and their actions. Typical North Carolina organic farms have a very high diversity of crops throughout the growing season.

Previous research conducted at four North Carolina organic farms revealed surprisingly high levels of parasitism and predation even from the beginning of the field season. What this indicates is that existing conditions on our organic farms seem very good for populations of natural enemies to develop and assist in crop pest management.

In recent years the increased interest in beneficial insect habitat has led to retail outlets offering premixed seeds of plants to provide habitat for insect predators and parasitoids. At least eight companies currently sell seed mixtures for beneficial insect habitat, and another company sells transplants for the same purpose. In our survey of the scientific literature, we found very little research evaluating the value of these mixes. We undertook a series of studies over approximately four years to determine the value of these mixes for North Carolina farmers. The following is a summary of the first of these studies that has been published in a scientific journal.

We conducted a two-year field study to evaluate the effectiveness of a commercially available beneficial insect habitat in decreasing pest caterpillar populations. The main objective of this study was to assess whether the habitat attracted and built up populations of two important insect parasites, *Trichogramma* wasps, well-known parasitoids of insect eggs, and *Cotesia* wasps, parasitoids of caterpillars. If the habitat performed as advertised, then we would see increased levels of egg and larval parasitism, decreased numbers of caterpillars, and reduced crop damage.

To conduct this study, we set up six pairs of organically managed 52 by 27 ft. staked tomato plots at the Center for Environmental Farming Systems, near Goldsboro, North Carolina. Peaceful Valley’s ‘Good Bug Blend’ was used as the habitat. We chose this blend because we felt the specific plant mix would give the best opportunity for success in our region. A separate study confirmed this. Seeds were planted in a campus greenhouse before the study so that transplants of habitat plants could be placed around the perimeter of treatment plots, ensuring that we got a good stand of habitat. We understand this would be completely impractical for a grower to do, but we wanted to give the habitat the best chance possible to work in our experiment. We wanted to conduct the experiment using the plant composition promised by the seed company, creating the “ideal results” whereby all the plant species in the mix germinated and thrived. A separate experiment we conducted evaluated germination and growth of several seed blends and showed that the seed blends have problems with germination, weed competition, etc. A brown-top millet border was planted as the control. The millet was kept mowed to approximately one foot to avoid seeding and to make it less attractive to beneficial insects. This ensured that the controls would harbor minimal insect populations as there were few resources for natural enemies.

Eggs of hornworms and tomato fruitworms were monitored each week so that parasitism and predation levels could be determined. The number of hornworm larvae and the percentage parasitized were also recorded.



(left) Normal hornworm egg

Hornworm egg parasitized by *Trichogramma* wasp (right)



A careful statistical analysis of the data from both years revealed that there was no difference in numbers of eggs or larvae between the treatment and control plots.

Both parasitism and predation levels were not changed by the presence of habitat. We feel this study was robust enough that we are very confident of the results.

Two pairs of plots from our experiment were located at the Small Farms Unit at CEFS. This Unit is like a lot of organically-managed farms in North Carolina, in that it already has a lot of positive landscape level elements working in its favor, as described at the beginning of this article.



However, while all the other locations at CEFS where plots were placed were transitioning to organic, they were surrounded by varying degrees of larger scale commodity fields. Some of these sites had natural vegetation nearby, while others did not. What this means is that



adding the commercial beneficial insect habitat had no effect on tomato pest management, regardless of the type of farming landscape in which this experiment was conducted. We concluded that the investment of time and money in a commercial plant

habitat is unlikely to be worthwhile. Natural biological control on organic farms will probably not be enhanced with this approach.

These results might seem surprising, however, the scientific literature is mixed on this subject. There are some cases where planted habitat has been shown to enhance biological control of pest species. Often, though, planted habitat is shown to attract beneficial insects but fails to provide economic control of pest species in nearby crops. We found this to be the case with commercial habitats. In fact, the habitat used in this study attracted the greatest diversity and abundance of beneficial insects of three commercial habitats we tested in another separate study. So this raises the question – why didn’t this habitat work? To begin with, these results shouldn’t be interpreted to mean that

beneficial insect habitat doesn't have a place in sustainable insect pest management systems. We continue to actively study planted habitats and their role in agroecosystems. What we believe it means is that we scientists need to develop a better understanding of whether landscape elements that already exist on farms and/or planted habitat plots can be manipulated to increase the activity of beneficial insects. Studying what doesn't work, as well as what does work, should ultimately lead us to better understanding how beneficial insect habitat can be effectively used in sustainable pest management programs.

In articles that are soon to be published in scientific journals, we tested some of the reasons why commercial habitats may not provide the value their advertising suggests. We hope to provide summaries of these articles in the Plow Sharing newsletter as they are published.

2006 NCSU Hands-on Farmstead Cheesemaking Short Course

The 2006 version of NC State's Hands-on Farmstead Cheesemaking short course has been scheduled for November 29 through December 1. Cheesemakers will receive hands-on experience and classroom contact designed to teach the basics for newcomers and practical technique and troubleshooting knowledge for those already well into cheese production. We welcome back Dr. Phil Tong of Cal Poly – San Luis Obispo and Dave Potter of Dairy Connections along with other university, government and industry representatives.

The course will cover the areas of:

- Basic cleaning, sanitation and quality testing
- Milk processing and regulations
- Basic and fermented foods microbiology
- Basic steps and chemistry of cheesemaking
- Hands-on production of several cheeses
- Farmstead economics and herd nutrition
- Packaging and labeling

The class will be limited to twenty students. An application for the short course is attached to this newsletter. The application includes a questionnaire to assess the developmental stage of your business.

Who Should Attend

The content of the course is directed at individuals that are investigating the requirements of farmstead cheese making, prepared to begin or already making Farmstead cheese.

Date, Location, & Accommodations

The course will begin on Wednesday, November 29, 2006 at 8:30 a.m. and end on Friday, December 1 at 4:00 p.m. and be held on the NC State University campus. Class location and hotel suggestions and rates will be provided at a later date.

Fee

Fee for the short course is \$550 for registrations postmarked by September 30, 2006 and \$650 after September 30. Fee includes short course materials, lunches and breaks. Hotel and other meals are not included.

For more information about the short course, contact Gary Cartwright at 919-513-2488 or gary_cartwright@ncsu.edu. Download the complete agenda and registration form on the Growing Small Farms website at <http://chatham.ces.ncsu.edu/growingsmallfarms/calendar.html>.

While we are on the subject of farmstead cheesemaking, check out these photos from **Celebrity Dairy**. For more photos, visit the GSF website at <http://chatham.ces.ncsu.edu/growingsmallfarms/farmphoto.html>. The photos below show Whitney May, Celebrity's cheesemaker, making a batch of chevres logs.



Dipping curd.



Whitney removes the cloth bags after the curd has drained.

Rolling logs.



Coating the logs with herbs.



The finished product.



D. Roos

Daylilies at Holly Hill Daylily Farm.



D. Roos

Harvesting sweet corn at Roberson Farm.

Picking blueberries at Ayrshire Farm.



D. Roos



D. Roos

Vicki and Bobby Roberson from Roberson Farm at the Pittsboro Farmers' Market.



D. Roos

Leah Cook of Wild Hare Farm talks about her high tunnel production of cut flowers.

Praying mantis on coneflower (*Echinacea*).



D. Roos

2006 Calendar of Events

updated weekly on the web:

<http://chatham.ces.ncsu.edu/growingsmallfarms/calendar.html>

September 16, 2006: CEFS Fall Festival at the Center for Environmental Farming Systems in Goldsboro, NC. The event will include demonstrations, tours, hands-on activities for children, a keynote speaker, and lots of fun! Email cefs_info@ncsu.edu or call 919-513-0954 for more information.

September 17, 2006: ChathamArts 'Potluck in a Pasture' at Perry-Winkle Farm in Chapel Hill, NC. Meet local artists and visit a farm as part of ChathamArts "Potluck in a Pasture" series of Sunday evening picnic suppers. The series celebrating local farmers and artists continues Sunday Sept. 17 from 6:00 to 8:00 p.m. at Perry-winkle Farm in north Chatham County. For directions and additional information, visit the ChathamArts website at <http://www.chathamarts.org> or call 919-542-0394.

September 18, 2006: Sustainable Cut Flower Production Field Day from 5:30-8:00 pm at Perry-winkle Farm in Chapel Hill, NC. Call 919-542-8202 for more information.

September 18, 2006: Workshop on Season Extension of Vegetable Crops from 6:00-8:00 pm at the CEFS in Goldsboro, NC. Participate in hands-on demonstrations of season extension for market farmers, vegetable producers, and home gardeners. Basic ideas of variety and cultivar selection, utilizing microclimates, agricultural fabrics and built structures will be briefly covered. Email cefs_info@ncsu.edu or call 919-513-0954 for more information.

September 19, 2006: Chatham Marketplace Producer Potluck from 6:00-8:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. This will also be an opportunity for CM staff to get input on how to strengthen their relationship with growers and producers in the region. For more information, call Chatham Marketplace at 919-542-2643.

September 23-24, 2006: 1st Annual CFSA Eastern Triangle Farm Tour featuring 10 farms in Wake, Franklin & Granville Counties! The tour runs from 1:00-5:00 pm. Contact CFSA at 919-542-2402 for more information.

September 25, 2006: The Chatham County Center of North Carolina Cooperative Extension will offer a **Pastured Poultry Production Conference** as part of its Enhancing Sustainability Series from 9:00 a.m.-5:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. Call 919-542-8202 for more information.

October 16, 2006: Workshop on High Tunnel Greenhouse Production from 6:00-8:00 pm at the CEFS in Goldsboro, NC. Learn how to design structures and produce winter-long harvests of winter hardy vegetables in unheated structures for retail and wholesale markets. Presenters have over 15 years of experience in high tunnel production agriculture. Email cefs_info@ncsu.edu or call 919-513-0954 for more information.

October 27-29, 2006: Annual Sustainable Agriculture Conference in Spartanburg, SC. Sponsored by Carolina Farm Stewardship Association. For more information, contact CFSA at 919-542-2402.

October 31-November 1, 2006: Mid-Atlantic Grazing Conference at the Center for Environmental Farming Systems in Goldsboro, NC. This multi-state educational program will include invited speakers, a panel discussion among dairy graziers, and presentations of pasture-based dairy research at CEFS. Email cefs_info@ncsu.edu or call 919-513-0954 for more information.

November 29-December 1, 2006: 3rd Annual Hands-on Farmstead Cheesemaking Short Course conducted by North Carolina State University in Raleigh, NC. For full details, contact Gary Cartwright at 919-513-2488.

December 1, 2006: The Chatham County Center of North Carolina Cooperative Extension will offer a **Pastured Poultry Production Conference** as part of its Enhancing Sustainability Series from 9:00 a.m.-5:00 p.m. at the Agricultural Building Auditorium in Pittsboro, NC. Call 919-542-8202 for more information.

December 12, 2006: Organic Grain Farmer Panel from 10:00 am-2:00 pm at the CEFS in Goldsboro, NC. This program will feature a panel of organic grain producers discussing challenges in the production and marketing of organic small grains, corn, and soybeans. Email cefs_info@ncsu.edu or call 919-513-0954 for more information.

January 25-28, 2007: Annual Southern Sustainable Agriculture Working Group (SAWG) conference in Louisville, KY. The conference will include short courses, conference sessions, exhibits, farm tours, and a trade show. Details to be released later. Visit the Southern SAWG website at <http://www.sawg.org> for more information.

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