True Nature Country Fair!

The 5th annual True Nature Country Fair is just one month away!

Join us October 8th at the Highland Lake Cove for a celebration of sustainable living and appalachian heritage.

Attractions include: Artisan bread baking and cob oven building...worm composting and horse logging...acupuncture, spoon carving, nature walks, and more! It is all at the fair!

The full program will be released online this Thursday, September 1st. Tickets for the Fair and our farm to table dinner, One Bowl, are available online. If you purchase your admission ticket online in advance, you will receive a Free Kids Pass. Dinner seating is limited, so get those tickets now!

Vendor spaces are still available. Click here for volunteer opportunities.

The gate fee of $10 includes admission to all the sessions. There are two sessions with an extra fee for materials and the One Bowl dinner, which will be served after the gates close, is $25 for adults and $7 for children under 12.

We need locally made soup bowls. In our attempt to keep the gate fee affordable, True Nature includes two fundraisers, a silent auction and our farm to table dinner, One Bowl. Please consider donating to our fundraising efforts. We are in special need of locally crafted soup bowls for the dinner. This year's entrees are Blue Ridge bison stew and Sweet Corn chowder. Historically, the favorite pieces at the auction are plants and garden supplies, local art and gift certificates for services.

See you at the Fair!
Tech notes are things we pick up directly from farmers, and include everything from preferred products to little shortcuts that can make a day on the farm a tad easier. Here are a few tiny things that you may find thrilling:

1. **MOLT-X**: We heard about this concoction at CRAFT member Sweet Earth Flower Farm's tour back in May 2011. Noting a problem with cabbage maggots attacking early season transplants, farmer Meredith McKissick and her partners were introduced to Molt-X to ward off the tiny worms. After weekly sprays to brassicas for over two months in the early season, field hands and farmers not only eradicated the population of maggots, but also noticed almost ZERO damage from flea beetles, an extremely common pest here in the mountains of NC. With only ho-hum flea beetle controls on the market today, this discovery knocked off some socks at the May CRAFT tour, and prompted this top tech note. A little more on Molt-X and its mechanism, per an email from Meredith to CRAFT's list serv post-tour:

   "Molt-X...is an OMRI listed insect growth regulator that disrupts the molting process. For those unfamiliar with insect growth, all insects go through several stages of shedding and developing a better-suited exoskeleton, or protective sheath around the outside of their soft bodies. Without the exoskeleton or shell, they could not survive. At each stage, their shell is a tad large for them, and then they grow into it. Just before it becomes inadequate, several hormones and enzymes have to kick in to develop a new shell under the existing one, and then once that process is complete, the older shell is shed. Insect growth regulators disrupt the hormones that allow the generation of a new exoskeleton, so the insect cannot survive through the next growth phase. Once treated with Molt-X, insects become sluggish, stop feeding, and fail to mature and females will not lay eggs. While the spray is organic, it is broad spectrum (kills good and bad insects), so exercise caution. It may be worth a try for some folks who are not only experiencing a lot of problems with flea beetles."

2. **Drip Tape Tie-Off**: CRAFT members had mixed reviews of this technique-- instead of cutting a section of drip tape and slipping it over the folded end of your line, simply tie a knot at the end of the line of drip tape to stop the water flow. Many members were familiar with this technique as a time saver on the farm, but when we saw it at Sweet Earth Flower Farm, it was notably being used with heavy duty 15 mil drip tape. Standard weight drip tape for veggie fields is a mere 6 mil, and some of the seasoned veggie farmers noted that tie-off ends did not prevent leaking with lighter mil. drip tapes. A question from a local researcher: "If you're planning to re-use your lines, how do you flush your lines at the end of the season?" Answer: either untie the knot or cut it off to flush the lines. If you do plan to tie-off, you may want to leave more excess at the end of the row to accommodate a cut at the end of the season.

---

**Agricultural Business Planning Opps**

**Carolina Farm Credit** offers a class in Agricultural Business Planning, facilitated by Dr. David Kohl, one of the nation's leading ag speakers and educators. Carolina Farm Credit is now accepting applications for the third class to participate in an e-learning financial and business planning course, which targets young, beginning, small, and minority farmers. Highlights of the program include modules that cover business and personal financial planning, understanding income statements, cash flow, and the smart use of credit on the farm. CFC will accept up to five participants for the program which will begin in October 2011. Applications, a course outline, and program information are available at [www.carolinafarmcredit.com](http://www.carolinafarmcredit.com). Applications will be accepted through September 1, 2011.

**Mountain Biz Works** is offering "Ag-Biz" Foundations classes. The next classes will be held in Madison County and Clay County, starting on September 12 and September 29th, respectively, and running for 8 weeks. These classes are designed to include, but are not limited to, farmers. It's a great chance to be introduced to business planning and to work on your first farm business plan if you're just getting into farming. It's also a good chance to re-work a business plan if you're planning a new enterprise or expanding your currently operating farm. Cost for the course is on a sliding scale and is offered to farmers at a very low rate. If you're interested, mark your calendars for the following dates:

**Madison County class: (starts Sept 12)**. The information session for this class has passed, but you can still register by contacting the instructor: Jane Renfroe 828.206.3907 / jane@mountainbizworks.org

**Clay County class (starts Sept. 29)**: Attend an information session on September 22 at 5pm in Hayesville, NC. You can register at the info session, or contact the instructor: Sheryl Rudd 828.631.0292 / sheryl@mountainbizworks.org

*************

**Sustainable Agriculture Conference**

The Carolina Farm Stewardship Association announces its 26th Annual Sustainable Ag Conference Nov. 11-13, 2011 in Durham, NC. This year's conference features:

- A roster of excellent speakers including our keynote address by Joan Dye Gussow.
- Over 60 cutting-edge, skill-building workshops on horticulture, livestock, soils, high tunnels, mushrooms, permaculture, bees, food, and more!
- Outstanding pre-conference tours and workshops from the experts in organic certification, mob grazing, organic production, and more!
- PLUS amazing local, organic meals and the chance to network with growers, gardeners, foodies and other ag-professionals!


*************

**Time to take your Soil Tests!**
and to make sure you have enough slack to get a good knot in the line.

3. Making Rabbit Meat more...familiar: CRAFT farmer Walter Harrill of Imladris Farm is a leading purveyor of rabbit meat in WNC. He not only sells meat to restaurants, where top chefs are eager to buy, but also moves rabbit meat through local markets. True, lots of regular joes have a hard time thinking of eating rabbits, and frankly don’t know how to cook their meat. Walt's solution: name the cuts after familiar beef or poultry products. Rabbit wings are not for real, but talking about legs as such sure makes customers more apt to purchase and experiment in the kitchen. "loins" and "drumsticks" are also often found printed on Imladris’ packages.

Save the Date!

Emails are coming in daily asking us for the dates of our 19th annual Spring Conference. For your calendars, the event will be held March 3-4, 2012 at the University of North Carolina at Asheville. Last year, 1700 people came out for the southeast’s largest smorgasbord of sustainable living. See you again in 2012, green thumbs!

MEET CRAFT

Green Toe Ground Farm

by Andrea Van Gunst

This past Saturday found the CRAFT group at Green Toe Ground Farm – we had a great turnout and it was a perfect day for being out on the farm. Green Toe Ground is run by Nicole and Gaelan and is a biodynamic farm. Biodynamics is a method of farming that sees a farm as a living individual and a goal on biodynamic farms is to have the farm generate its own compost, livestock replacements, seed, etc. Planting and harvesting dates and times are decided according to star and planetary positions.

We started our tour at the compost pile, which is in many ways the heart of a biodynamic farm. Nicole and Gaelan spoke about the preparations they put into the compost pile and out on the farm fields. To read more about these preparations, please visit http://www.jpibiodynamics.org/catalog/8. We then headed out into the pasture to meet Gerta the cow. Gerta also holds a place of key importance in the biodynamic cycle – providing fresh milk and manure for the compost and for the compost preparations. While here we also saw their small flock of sheep: these sheep are hand sheared and the wool is spun and felted on the farm. At age, the sheep are sent to slaughter and sold to local restaurants.

We continued our tour to the intern house – a structure built almost entirely out of recycled materials and built by hand over the winter. While there is no electricity or running water to the cabin, it has a beautiful view, a solar hot water shower and a wood stove to keep it cozy in the late fall and early spring. We then headed through the woods to the field where the hogs are kept. Nicole and Gaelan no longer need to buy any feed for their hogs – they use by-products from a local bakery, their own milk and vegetable scraps. The hogs are gaining weight well on this free diet! They are also used to “till” future farm fields – they are fenced into an area where they help clear vegetation, loosen the
soil and fertilize. Here we also saw the main fall field – all the crops were covered with remay to reduce insect pressure until the weather cools down. Nicole explained that they don’t spray for pests very much at Green Toe but they do often “ash.” Ashing is a process of collecting bugs, burning them, diluting these ashes with water and then spreading the mixture around the field. This biodynamic process is said to be effective but needs 2-3 years to yield results.

Nicole and Gaelan stopped here to talk about their farm dinners. This is a relatively new venture for them and they received an Ag Options grant to help put on these events. They currently have about 3 dinners per season with between 30 – 50 folks coming to each dinner. They source almost 100% of the food from their farm and oftentimes have live music for entertainment. To read more about Green Toe Farm Dinners, please visit http://www.greentoegroundnc.com/.

The last stop on our tour was to make cheese over an open fire by the river. Gaelan made mozzarella with milk from the farm - mozzarella is an easy to make farm product and we all got to take part in the process...all the way to the taste testing. Delicious!

We finished our tour with a wonderful potluck, swimming in the river, practicing spinning farm-produced wool into yarn and catching up with one another. Thanks so much to all those who came and thanks again to Nicole and Gaelan for hosting us and putting on such a great tour.

CRAFT (Collaborative Regional Alliance for Farmer Training) is a seasonal farmer-training program for organic farmers. Membership is rolling, and we've just received new funding to expand programming into the off season! Check out details or join online by clicking here.

Gardener's Corner: Ask Ruth

Dear Ruth,

I recently moved to eastern TN from New Mexico/Colorado where many (organic) gardeners use capsaicin spray, powder, or oil from pepper plants (which you can buy easily there at most garden stores) as a good alternative to deter deer, rabbits, squirrels (and less effectively, gophers) from eating plants, and also as a general pest deterrent. I've spoken with a few people in the area but haven't heard or seen it used in this region much. Do you have any more information regarding capsaicinoids and insect control?

Thanks,
Xanda Gordon

Dear Xanda,

Hot peppers (capsicum) are a New World plant originating from South America, probably in the region of southern Brazil to Bolivia. Some people can't imagine enduring a meal without the spiciness of hot peppers. Hot pepper sauces like Tabasco® inspire legions of loyal followers, and hot pepper fanatics are always searching for the latest pepper with the hottest burn. Gardeners love the instant gratification of whipping up a fresh pepper salsa straight from the garden.
Despite the fact that many humans love hot peppers, *capsaicinoids*, the “heat” in peppers, is an irritant to mammals and insects. You could even say that (Michael Pollan style) as the hot pepper plant evolved, it favored its heat-producing qualities as a protection for its seed from mammals. Mammals tend to destroy the seed when they chew it, while hot pepper seeds can pass through a bird’s system and still germinate.

**Peppers are rated by the Scoville Heat Index ~**

- **Sweet Bell Pepper:** 0
- **Tabasco® Sauce:** 2,500 to 5,000
- **Jalapeno:** 2,500 to 9,000
- **Cayenne:** 30,000 to 50,000
- **Scotch Bonnet:** 100,000 to 350,000
- **Bhut Jolokia “Ghost Pepper”:** 800,000 to 1,041,000
- **Common Pepper Spray (used for personal protection):** 2,000,000 to 3,000,000

Hot pepper spray is considered a *deterrent* to insects and mammals, rather than an insecticide. As you can imagine when a rabbit or an insect touches/bites into a leaf/fruit covered with a hot pepper spray, their immediate reaction would be to spit it out and discontinue eating that plant. Hot pepper would certainly be irritating to the insect’s body. Using the Scoville Units indicated above ~ I would conclude that the hotter the pepper used, the more effective the spray is liable to be. However, Jalapeño peppers should be sufficiently hot to do the job without intimidating the preparer. And Xanda, keep in mind that Colorado and New Mexico have drier climates with lower rainfall and scant humidity ~ therefore hot pepper sprays would linger longer on the plants undiluted and demonstrate more effectiveness in dry regions.

Before delving any deeper into this topic, it should be stated that *extreme caution* should always be exercised when handling hot peppers (whether for use as food or as an deterrent to plant damage). Always wear rubber gloves when handling hot peppers. If you don’t wear gloves, the peppers will burn your hands. The seeds are the very hottest part of the plant. Be careful not to touch your eyes or any other mucous membranes when handling hot peppers. If you are blending the peppers, or cooking them on the stove, beware of the fumes in the air above the blender and in the steam above your pot. Speaking from experience, even something as relatively mild as Tabasco® will volatize in the steam and get in your eyes. When spraying your pepper mixture, don’t spray into the wind.

**Local Farmer Feedback on using hot pepper spray:**

I asked a few local farmers for their input on hot pepper sprays. A few had never used them at all, or responded like **Vanessa Campbell** of Full Sun Farm who said they “intuitively felt it didn’t work.” **Barry Rubenstein** of B & L Organics said they don’t have rabbit problems, but that they had tried hot pepper spray to control flea beetles one season. They did not have good results, and someone suggested to him that he would have needed to spray almost daily to get good results.

**Meredith McKissick** of Sweet Earth Flower Farm (and OGS Director) had positive feedback: “I use hot pepper wax as a deterrent for leafhoppers. They are a vector for aster yellows, a common disease that can cripple crops of lettuce, dahlias and asters (among other things). Used in rotation with Pyganic [a pyrethrin spray] I have found it very effective at keeping my dahlias in great condition and weekly sprays to asters and strawflowers have helped as well…I have never used it on lettuce as I am not sure the effect it would have on harvest of the greens.”

**Patryk Battle** of Sparkling Earth Farm received a bottle of Hot Pepper Wax at a SAC conference years ago and still hasn’t tried it. Several times Pat has “used homemade habanero spray to keep rabbits off my newly emerging legumes. I blend a habanero in a bit of water till it is liquefied. I leave the lid on the blender for at least 15 minutes to be sure no habanero is breathed in by anyone. I strain it and then spray it with enough water to effect coverage. I usually use a surfactant or at least soap to make it last a bit. Although others who have tried this have reported mixed results, I have always stopped my rabbit problems first try. However I have always applied early ~ usually after the first sign of predation on my legumes.”

**Reports on hot peppers as a deterrent are mixed.** **Rodale’s Chemical-free Yard & Garden** states that “… Researchers have found that as little as 1/25 ounce of capsaicin [powder] sprinkled around an onion plant reduced the number of onion maggot eggs laid around the plant by 75%, compared to a control plant.

**Purdue University** Extension’s Organic Vegetable Production researchers found that plant extract repellent products (such as hot pepper wax) “work poorly if at all, and we generally do not recommend them.” In a **Cornell University** test on broccoli transplants, Hot Pepper Wax was found to be as effective as Rotenone 5% on controlling flea beetles (this test was on transplants only and not a field test on larger plants).

According to **Clemson University**, **capsaicin** can be used on ornamentals ~ outdoors and indoors ~ for control of aphids, spider mites, thrips, whitefly, lace bugs, leafhoppers, and other pests...they appear to be effective at repelling certain animal pests such as rabbits, deer and squirrels. **University of Massachusetts-Amherst Extension** points out that Hot Pepper Wax is no longer allowable for Certified Organic growers. The
National Organic Program allows capsaicin, the active ingredient in Hot Pepper Wax; but does not allow the wax in current use.

**Hot Pepper Sprays may target:** rabbits, squirrels, deer, aphids, spider mites, whiteflies, cabbage loopers, beet armyworms, leafhoppers, and other soft-bodied insects that feed on the leaves, flowers, fruit and stems of plants. It seems to deter squirrels and rabbits better than deer.

**Other Cautions:** Some plants are extra-sensitive to pepper spray, such as basil, parsley, peppermint, African violets with variegated leaves, fruit trees in the pink-bud stage, and Bleeding Heart (Dicentra eximia). It is best to test your spray on a small area of plant material before applying to the entire crop. Hot pepper spray should be applied in the evening so it has all night to dry before the suns rays hit the plant in the morning. Spray the entire plant, paying special attention to the undersides of leaves. If you are using Hot Pepper Wax, the cool evening temperatures will allow the wax to harden on the plant overnight (and become transparent.) Remember that hot pepper spray will not protect new growth, and can also be harmful to beneficial insects. There is a zero hour re-entry after spraying hot pepper. Even though hot pepper wax washes off easily with warm water, some plants ~ like lettuce ~ may wilt when washed with warm water.

**How often to spray:** Reports differed substantially on this question ~ from repeat after rain, dew, or heavy humidity; to repeat every few days; to repeat in 7 to 10 days; to lasts up to 30 days. The wax product will probably last longest...up to 30 days. If you are making your own spray without wax, add dish soap or a surfactant to encourage the hot pepper to stick on the plant longer.

**Homemade Hot Pepper Spray Recipe:** Remember to use rubber gloves and caution when handling hot peppers (see above).

5-10 Hot Peppers depending on size
(from your garden or the market, or substitute powdered cayenne pepper)
1 teaspoon pure Soap (dish soap is OK, but not detergent types)
1 tablespoon of Vegetable Oil
6 or more cloves of Garlic (Optional)
1/2 gallon Water, or up to 1 gallon (use 2-3 cups in blender)

Put ingredients in the blender. Add 2-3 cups water. Blend thoroughly until liquefied, adding more water if necessary. Let stand one hour. Liquefy again. Let mixture sit until fumes have settled. Strain (through cheesecloth, coffee filter, paper towel). Dilute with additional water and spray on plants in the evening (using caution at all times when handling the material and during sprayer clean-up). Extra material can be stored in a jar in the refrigerator for a couple of weeks.

Xanda ~ welcome to the southern Appalachians and good luck with your gardening efforts in this area.

Best wishes,
Ruth

Gardeners: Got a question for Ruth? Email it to us enews@organicgrowersschool.org

Ruth Gonzalez is a former market farmer, gardener, local food advocate, and founder of the Tailgate Market Fan Club where she blogs at [http://tailgatemarkettfanclub.wordpress.com](http://tailgatemarkettfanclub.wordpress.com). In her job at Reems Creek Nursery, Ruth offers advice on all sorts of gardening questions, and benefits daily from the wisdom of local gardeners.

Ask Ruth © 2010 Ruth Gonzalez & Organic Growers School

**Farmer’s Corner: Ask Tom**

Dear Tom –

The tomato plants in my cold frame are dropping blossoms. What is causing that?

-- Perplexed in Barnardsville

Dear Perplexed --
I suspect either heat in the evening or, more likely, the fruit to foliage ratio on your tomato plants.

Tomatoes need relatively cool evening temperatures (in the sixties to low seventies) to set fruit. Our unusually warm summer plus the added warming of a coldframe may have affected your fruit set for a few weeks in July.

A more likely cause which we see each year is the number of fruit on your plant. A fellow grower once told me that Trust tomatoes prefer no more than 21 fruit on the vine at any one time. If you have seven “hands” in production at once, then that means only three fruit per cluster. We also notice that the fruit on the first few hands are usually very large, placing more demands on the plant’s ability to produce sugars and to ripen fruit. One way to think of it is that the tomato’s main goal is to produce seed for the next generation so it wants to be sure that it can ripen the fruit that it does set. When the fruit load exceeds some number, it responds by dropping blossoms until you harvest some of the fruit.

Growers who need a steady production usually remove immature green fruit to keep the foliage in balance with the amount of ripening fruit. Another approach is plant rotations of tomatoes so that the peak in production of the second rotation fills the gap created by the aborted blossoms.

Happy growing!

-- Tom

Farmers: Got a Question for Tom? Email it to enews@organicgrowersschool.org