



Supporting Sustainable Agriculture
in the Southern Appalachians through
Educational Programs and Outreach



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April 2010 Growers Notebook News, Tips, and Advice on Things Organic

MEET CRAFT: Full Sun Farm



Spring has sprung, farmers are busy, and CRAFT farm tours have started for the 2010 season. This year, farmer membership is up 40%, and the number of students enrolled has doubled! For our first tour this season, we made the drive to Full Sun Farm in Sandy Mush, NC, where Vanessa Campbell and Alex Brown, along with their daughters and three interns, grow a diversity of vegetables, cut flowers, and small fruits. The focus topic was

cover cropping, field preparation and planting. Touring the farm, the group compared beds with overwintered crops, beds newly spaded and planted, and beds with thick stands of cover crops still growing. Alex stressed the importance of cover cropping for different purposes, and mentioned that at Full Sun Farm, the focus of cover cropping is soil fertility, and increased soil structure and tilth. Eventually, Alex and Vanessa see their cover crop rotations as a means to control weeds on the farm.

Beginning farmers faced with the many choices of cover crops available learned great tips at the farm. Alex recommends planting a mix of grain and legume, and tailoring the crop to season so that it fits with your rotation plan. For example, in mid to late summer, Alex and Vanessa sow oats in beds that will be planted early in the following year. The oats establish in the late summer and fall, and then winterkill with the frost, leaving thick mulch behind to suppress weeds and add organic matter to spring planted beds. For fields that they intend to overwinter in cover crop, and may not need until later in the next year, Alex and Vanessa use a combo of annual rye, hairy vetch, and some crimson clover.

Winter cover crops at Full Sun Farm



Alex warned that rye is extremely competitive, and as with any cover crop, you should study its life cycle carefully before selecting. Rye is difficult to kill the following year unless you wait until the plant reaches its reproductive cycle. You'll recognize the end of the vegetative stage and the beginning of this reproductive stage when the plants send up seed heads and prepare to scatter seeds. Before the scatter, flail mow or bush hog to kill the plant, leaving the biomass in the field. If you need a crop that will be less competitive than rye but still overwinter, try winter wheat. Although it will not leave as much biomass as rye, it will reach reproductive stage earlier in the season, and will not be as difficult to kill and then incorporate before planting.

The group checks out planting equipment



On the field prep and planting topic, the group learned about planning planting according to mechanical cultivation plans, and saw Full Sun Farm's equipment in action. We viewed their Imants rotary spader, a waterwheel transplanter, and their Allis Chalmers G tractor equipped with Planet Jr. planters, and several cultivating implements. Alex also discussed their use of bio char in their potting mix, and reported that overall health and vigor of transplants has

improved since the addition of bio char to their potting medium.

After the tour, everyone gathered in the shade for the traditional CRAFT pot luck, farmers chatted about the first tailgate markets of the season, and interns traded ideas about on farm living and learning. A great first tour finished, and many more to come. Thanks to Alex and Vanessa, Bell and Ada for welcoming CRAFT to the farm. You can catch up with the folks of Full Sun Farm at the North Asheville Tailgate Market on Saturday mornings at UNCA, or at the French Broad Food Co-op market on Wednesday afternoons.



For more information about CRAFT, a season-long training *for farmers by farmers*, visit www.organicgrowersschool.org/content/. Membership is rolling and we've got some great tours planned for the coming months. Next stop: Green Toe Ground Farm in Celo, NC for a lesson in Composting and Biodynamic growing.

Farmer's Corner: Ask Tom

Note: This month's article is a re-print of one that Tom wrote for *Growing for Market*.



THESE FARMERS CALL LANDSCAPE FABRIC "THE MARRIAGE SAVER"

A few years ago farmer friends decided to relocate to South America and sold all their farm equipment, including several rolls of landscape fabric. I was curious about this material but too frugal to buy a whole roll. We tried it, found it very helpful, and now own enough to cover our market garden.

The term "landscape fabric" is applied to a variety of materials. I refer to a black, woven geotextile with narrow green stripes every foot across the width of the fabric. It is most commonly used for greenhouse floors and in container nurseries. Typically it is held down by sod staples -- metal wires bent into a U shape and pressed through the fabric and into the soil.

We expected weed suppression, and that certainly occurs, but other unadvertised features are at least as important on our farm. Other benefits include more even moisture across the bed, warmer soil in cold weather, cooler soil in hot weather, and most importantly -- cleaner produce. Once the crop grows bigger than the transplant hole, rain and overhead irrigation no longer splash soil on the crop. Clean crops result in quicker harvest and less waste.

In contrast to container nurseries, flower and vegetable growers need holes in the landscape fabric. Melting rather than cutting holes is important to avoid unraveling of the fabric. Our system involves stretching the fabric in a convenient location near a roaring fire. We use staples every three feet around the perimeter and down the "pathways" every four feet across the twelve-foot fabric. In advance we assembled a branding iron style gizmo comprised of four feet of half-inch rebar, locking pliers like Vice-grips, and a hose clamp to attach them to each other. We use a pipefitting that is three inches wide on one end and two inches on the other. For us, four-inch holes let too many weeds grow and two-inch holes are hard to transplant through. We decide in advance what pattern of holes is needed. One-foot spacing on one-foot centers is good for lettuce and we use wider spacing for cabbage and vine crops.

Getting back to the roaring fire, we throw in the pipefittings and wait until they glow. Grabbing one with BBQ tongs, we leave the others to keep heating. After clamping the fitting with the vice grips on the gizmo, we melt some holes until the fitting cools (about 50 holes on a warm day). Then the warm fitting is replaced with a glowing red one and the hole melting is repeated 600 times on a 12 by 50-foot section of lettuce fabric. We cut the sections of fabric with another rebar heated in the fire so the ends of the fabric do not unravel.

Good timing helps with weed suppression. We try to till in supplements right before we stretch the fabric and transplant. Usually a two-inch lettuce transplant placed in a three-inch hole can outgrow any weeds that sprout around it. If the soil is prepared several days in advance, we sometimes need to spot weed once by hand around the growing transplants. Between rotations we pull back the fabric, add supplements, till, and restretch the fabric. Tight fabric is important to avoid flapping in high winds. Flapping fabric can lift the transplants before roots are established. After they are rooted the plants will hold the fabric down. To meet organic rules the fabric must be removed from the field at season's end.

Is all this landscape fabric sustainable? We are using fabric that has been in use for twelve years and it looks fine. I predict 20 or more years of life although the manufacturers guarantee eight to ten years. The staples eventually rust through and need to be replaced each five to ten years. 1000 staples are about \$50. The fabric is about \$275 for a 12 by 300 foot roll (0.08 acre). We covered the capital expense in less than a year of avoided weed control labor so it seems to be economically sustainable. We use more petroleum in our tiller than is contained in the fabric that lasts many years. We try to avoid plastic generally but this application passes our environmental screen.

While I am on the topic of sustainability I should explain the "marriage saver" in the title. Picture this often-repeated conversation between a happy farm couple in the middle of a lettuce harvest. "Well, someone should have done a better job of hoeing this lettuce," says one while pointing at a huge weed that has stunted the four heads of lettuce on each side of the weed. "You're right. Someone should have hoed this bed a little better," says the other. It's nice if each couple contains someone that just loves hoeing and weeding, but no one like that lives at our house. We seldom have that conversation since landscape fabric arrived. As a result we continue to pursue domestic sustainability with this tool that Karen emphatically calls the "marriage saver."

Our thank to Buffy and Steve White as well as to Alex and Betsy Hitt for their contribution to this article. Karen Thatcher, Tom Elmore and their daughter Elizabeth operate Thatchmore Farm in Leicester, North Carolina. They grow hollies and organic fruit and vegetables.

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

Gardener's Corner: Ask Ruth



We have two questions this month, one on **Brussels sprouts** and one about **cover crop** incorporation.

Dear Ruth,

*I would like to grow **Brussels sprouts** this year. Is it too warm to grow them in the spring here? Will they overwinter like collards and kale? Any varieties you would recommend for our climate?*

*Thanks,
Katherine in Marshall*

Dear Katherine,

Yes, you can grow **Brussels sprouts** here in the spring. They are usually planted with other cool weather crops for a spring harvest, and again in late summer for fall harvest. Plant Brussels sprouts **as early as you can**, so they have time to produce nice, firm heads before hot weather arrives.

Meredith McKissick, of Crooked Creek Farm in **Old Fort, NC**, is able to overwinter Brussels sprouts very successfully in low tunnels. She plants in late August or September (they need to be well-established before the onset of winter), side-dresses with compost, and pulls the bottom leaves all fall (and winter if needed) to expose the forming sprouts. She harvests great sprouts in February and early March. However, Old Fort is slightly milder than Asheville. **I don't think they would overwinter reliably in the Asheville** area, as the severity of our winters is unpredictable. On a small scale, you may be able to get them through the winter under tunnels covered with floating row cover.

Harvest fall crops of Brussels sprouts after frost and into December. **To store** them, harvest before the ground freezes in fall. Pull them up by the roots and store them in the refrigerator or in a cool cellar. **Old timers** used to pull cabbage up by the roots in the fall, dig a generous hole and bury the cabbages – cabbage down / roots up - in a mix of loose soil and straw. They would pull them out of the hole by the roots as needed. I have not tested this, but I have a feeling this may work for Brussels sprouts as well, since they seem more akin to cabbage than to kale. Tom Elmore, of Thatchmore Farm, thinks burying them is questionable, since Brussels sprouts are so small that they can't afford to lose any of their outside leaves.

Starting at the bottom of the stalk, harvest Brussels sprouts when the sprouts are firm and round; additional upper sprouts will continue forming. Break off the leaf just below the sprout and then cut or pop the sprout off the

stalk. The nursery where I work grows 'Bubbles', 'Royal Marble', and 'Long Island' (new this year). Meredith plants 'Bubbles' and 'Oliver'. **Brussels sprouts require plenty of fertility**, a soil pH above 6.0, and water on a regular basis (you may need to irrigate).

Please keep us updated on the outcome, Katherine.

Best wishes,
Ruth

Hi Ruth,

*Last fall I was introduced to the idea of **cover crops** and decided to try it. I had the soil tested **in my raised beds** and put a cover crop (a combination of oats, rye, hairy vetch, and a pea). A few weeks ago I cut the cover crop and covered the beds with cardboard. I'm not sure what to do from now on. Should I be working the cover crop into the soil at some point and if so what is the best way? I was hoping to plant one bed in mid to late April, and the others a little later. Also, some of the crop is peeking out around the edges, and of course still growing. Should I stuff paper around the edges to block out the light?*

*Thank you,
Carmen*

Dear Carmen,

Wonderful to hear that you are **planting cover crops** in your raised beds! That is one of the fastest, most cost-effective ways to improve your soil. As you know, cover crops are sometimes called "green manure".

Usually the cover crop is cut down in the spring just prior to planting your early crops, or later if you are planting summer crops. You can weed-eat the cover crop (a blade attachment is really handy for this), or mow it down with a lawn mower set to the highest setting. If you are desperate, you could even cut it with scissors ~ if you don't have other tools and your bed is smallish. After cutting it down, let it lay on the bed to wither for a few days or a week. As it browns up it will be much easier to incorporate into your raised bed since it will have less mass. At that point you could till it into your garden soil, or incorporate it into the soil with a garden fork.

I'm sorry, I have not heard of the cardboard technique, but since rye is one of your covers, it could be causing your frustration. **Wait to cut down your rye** until it has had an opportunity to form seedheads. Otherwise it will just keep coming back in an effort to do it's job of setting seed. You can just **let the sun do the work** of reducing the bulk of the green matter for a few days. After the

bulk is reduced, you will want to incorporate your cover crop into the soil in a timely manner, so as not to lose the nutrient value. **Alternatively**, you could choose to remove the cover crop and put it on your compost pile. Compost it, and then return the amped-up-with-microbes compost back into your raised bed for a kicking boost of micro-organisms.

More: *Rye* is a good cover crop that can be planted very late into fall, but it is the hardest of the grains to incorporate back into your soil. The bigger it gets, the harder it will be. *Oats and barley* will often winter-kill. They will prevent soil erosion, add root matter to the ground, and uptake deep nutrients; but they will be much easier to incorporate in spring. Although *vetch* is a recommended cover crop, be aware that it can become weedy and hard to eliminate. If you plant *Austrian winter peas*, they have an added benefit ~ you can forage on the delicious new tips, or harvest them to eat in your salads until you cut your cover crop down.

Improving your soil is the whole foundation of organic gardening, ie. “Feed the soil, not the plant.” *Keep it up good work, Carmen!*

Good luck this growing season,
Ruth

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

Ruth Gonzalez is a former market farmer, avid gardener, local food advocate, and founder of the Tailgate Market Fan Club Blog at www.tailgatemarketfanclub.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.

True Nature Country Fair!

true nature
country fair

The 4th annual True Nature Country Fair is September 25 and 26 at the Big Ivy Community Center in Barnardsville, NC. A celebration of life in connection with the earth, the Fair



features local and sustainable products and resources, all from the southern appalachian region. \$5/adult allows you entry to over 60 classes, workshops, and plant walks on topics including medicinal herbs, homesteading, health and healing, permaculture, primitive skills, gardening, alternative energy, green building, and more! Also enjoy small livestock displays, local craft artisans, a trade show, local and organic food and treats, a silent auction, live music, and contra dancing. Old time musicians can participate in the second annual old time banjo and fiddle contest.

Kids love our Sprouts children's program where they learn about and interact with nature. Making art projects with seeds, going for nature hunts, or playing music with recycled instruments are great ways for your kids to enjoy the fair, for just \$3/child.

A schedule of classes and activities will be posted online in the coming months. In the meantime, if you want to get involved as a volunteer, sponsor, or exhibitor, contact True Nature Program Manager Karen Vizzina at earthstarnc@earthlink.net. For inquiries about the old time banjo and fiddle contest, contact Joe Hallock at joe@organicgrowersschool.org.

The artwork above, chosen to represent True Nature this year is a hand forged metal gate created by Douglas Lapham of Asheville, NC. Doug is a studio artist and compulsive recycler who begins many of his custom pieces with salvaged materials that have unusual textures and shapes. He then transforms them into what he calls "fine and funky forged and fabricated furnishings" for both homes and businesses.

Visit www.organicgrowersschool.org/content/1515 for more info about the Fair.

NewsBits

News Bits are reader submitted. To submit your bit, email enews@organicgrowersschool.org

Bakersville, NC - N.C. MarketReady Fresh Produce Safety - Field to Family is a new NC Cooperative Extension program developed to educate fruit and vegetable growers about measures to minimize food safety risks. The training focuses on Good Agricultural practices(GAPs) and what it takes to obtain GAPs certification.

NC Cooperative Extension Agents from the West District will conduct the Tier 1 N.C. Market Ready Training at the Historic Bakersville Courthouse. The seven-hour training will be divided into two sessions, with the first being held on Tuesday, May 4 and the second on May 18. Both sessions will run from 5:30-9:00 p.m. Producers must attend both sessions to receive their certificates. The fee for the training is \$10/person. Pre-registration is required. Please call 828-688-4811 to do so.

Tier 1 will address GAPs that are directly related to field production

and harvest. The training will include an introduction to common food-borne pathogens and diseases as well as recognizing points of potential contamination, proper use of biosolids as a nutrient source, effective hand washing procedures, packing facility cleanliness and verifying water quality fro field application and postharvest handling. Anyone involved in handling fresh produce, from farmers and field hands to packinghouse employees to truckers will benefit from this training. Attendance will result in growers moving towards compliance of pending fresh produce safety legislation. Upon completion, attendees will receive a certificate of attendance and their names will be posted on the NC MarketReady web site, allowing end markets to find growers that have completed the training.

Gaps certification requires establishing a food safety plan and passing a third-party audit that assesses the strength of the plan and ensures that it is properly implemented. Currently, GAPs certification is voluntary for North Carolina farmers, though many markets are now requesting it before they will buy.