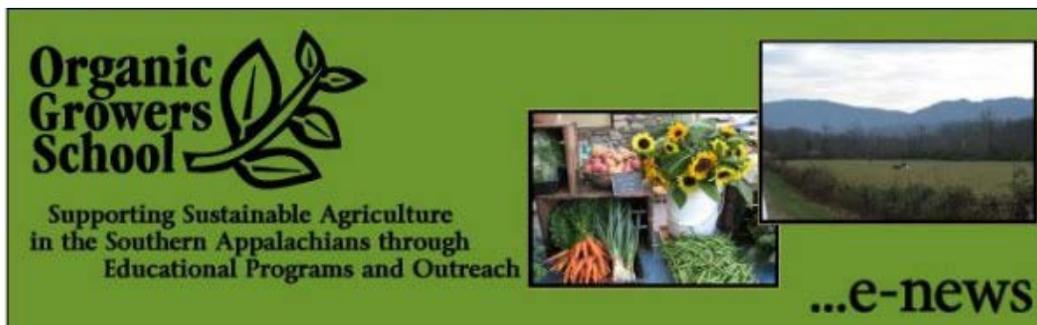


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July 2010 Growers Notebook News, Tips, & Advice on Things Organic

True Nature Country Fair



The True Nature Country Fair is just around the corner! Join the artisans, farmers, craftspeople, chefs, and families of the southern Appalachians for a celebration of life in connection with the Earth, September 25 & 26 at the Big Ivy

Community Center in Barnardsville, NC. A showcase of products and resources that are local and sustainable, everything featured at the Fair must be at least 50% organic and local to the sustainable appalachian region. All day Saturday and Sunday, the Fair will feature educational workshops on all aspects of sustainable living, live music and dance, a kids program, a trade show, local foods dinner, plant walks, and more! Gates open from 10-6 both days. Cost is \$5 per adult and \$3 per child aged 2 and up. (the littlest ones get in for free.) For more information about this event, or for details on how you can get involved, [visit our website](#).

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CRAFT-WNC

Thanks to the folks at Camp Celo Gardens for hosting the CRAFT group in July! Sam Maren and Anne Maren-Hogan, along with their intern Lea, showed off their diversified gardens, which provide food for restaurants in Asheville, as well as for hundreds of campers who pass through Camp Celo each summer. The focus of the July tour was value-added processing, and Lea ran through the basics of vegetable fermentation, allowing each CRAFT participant to try his or her hand at making fermented veggies. Check out Camp Celo, in their own words by visiting their blog: campcelogardens.blogspot.com



Next month: CRAFT visits Flying Cloud Farm for a look at pest management.

CRAFT-WNC is a grassroots farmer training program developed by established growers

WANTED: Local Potters! This local foods dinner at this year's Fair will feature hearty, healthy soups and stews. We would love to serve it up in beautiful hand made bowls. Would you like to donate your pottery to the event? Artists donating four or more bowls will be our guest for dinner. All participating artists will be listed in the dinner program. Interested? Contact Program Manager Karen Vizzina at 828.342.1849 or earthstarnc@earthlink.net

SHOW OFF YOUR STUFF! The first ever True Nature Country Fair Silent Auction is accepting donations. Over 1000 people are expected to visit the Fair. Is your business committed to the green movement? Or, are you a local entrepreneur? If so, the silent auction gives you a great opportunity to support experiential education while also showcasing your products and services. Interested donors please contact Karen Vizzina at 828.342.1849 or earthstarnc@earthlink.net

Guest Column: Farm Biology 101

by Dr. Richard Morel

Each of us values the many bounties brought to us by our dedicated local farmers, but what about the underlying and fascinating biology that paves the way to harvest? This series of articles will take us on a journey from sun to seed and beyond.

Photosynthesis



We all know that plants need sunlight to grow and produce the bounty that we buy at market and savor at our tables. But just how does sunlight assist in serving up this cornucopia? Living requires energy, your eyes and brain are using energy that originally came from the sun to read what you're reading right now, and plants use the sun's energy to live

and grow and produce the food we eat. Sunlight is the source of life's energy, and leaves are fascinating and sophisticated solar panels that convert light energy into food energy. Green plants, including farm crops, harvest the sun's energy and package it into sugar molecules that they, and we, need to stay alive. Without the conversion from light energy into the chemical energy in sugar, we wouldn't be here. We owe a lot to green plants!

But where does the sugar that they make come from? Sugar that plants put together is made of just three kinds of atoms: carbon, hydrogen, and oxygen, and they come from just two simple ingredients, water and carbon dioxide. Recall that water is H₂O, that is, two hydrogen atoms attached to an oxygen atom, and those hydrogen atoms really like staying attached to the oxygen atom. It takes a lot of energy to strip them away. That's where the Sun's energy comes in. Plants use some of the energy that they receive from sunlight to pull the hydrogen off of oxygen, making the hydrogen available for combining with carbon dioxide. That's what sugar is made of, hydrogen combined with carbon dioxide. Plants use another portion of the Sun's light energy to fashion the chemical bonds that hold the atoms in the sugar together. Those bonds contain energy that originally came from the Sun, so, in this sense, we

for aspiring growers. Membership is rolling, and info is available [on our website](#).

Thinking about Next Season?

Mired as we are in the height of the 2010 growing season, it's also time to start thinking about 2011. Get on the roster of farmers participating in **NC Apprentice Link**, the intern matching service provided by OGS. Here are a few benefits:

- NC Apprentice Link provides pre-screening of interns, so you never have to see an application for someone who does not match your needs. We select potential matches for you, limiting the time you spend searching.
- NC Apprentice Link will keep your listing season after season, and will close your listing only when your positions have filled each season.
- Farmers in TN, SC, and VA are welcome to join. Our goal is for this service to be a regional resource.
- It's free! Why not try it? If we can find you an intern with little or no work for you, what are you waiting for?

[Get your farm on the list. Visit our website for more details.](#)

Interested in apprenticing on a farm? Prospective interns can apply, too. Anytime! [Visit our website to sign up.](#)

Farmer's Corner: Ask Tom



Hey Tom!

A farm where I work is interested in chatting with someone about walk-behind bush hogs. Do you have any opinions on them?

Thanks! -- Beth

Beth -

As you may recall, I am a fan of walk-behind bush hogs. We have limited flat land on our farm so our fruit crops and ornamentals are on land that is too steep to comfortably work with a tractor. The walk-behind brush cutter can work on steeper terrain and also can get closer to blueberries and apple trees.

We have an old Bachtold Brothers big wheel brush cutter that was originally developed to mow corners and ditches of large corn and soybean fields. We can still get parts so we keep repairing it as it ages, but more modern designs have more features (like reverse gear.) We replaced the engine last year and added electric start (what a luxury).

These devices cut brush with ease up to about an inch in diameter. (See video clips below.) They



are all solar powered!

And, you're breathing the leftover from water right now; it's the oxygen that was attached to the hydrogen atoms in H₂O.

We need oxygen, as do living crops, to extract the Sun's energy that was packaged in sugar molecules. That unpacking results in the very ingredients we started with, carbon dioxide and water. You're exhaling them right now as you breathe. The cycle goes on as long as plants do what they do with sunlight, and we continue to eat.

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Dr. Morel is working on a book of farm biology pieces. Interested in joining his mailing list? Contact him directly at dmdrentropy237@gmail.com

Gardener's Corner: Ask Ruth



Dear Ruth,

From Linda in Zirconia:

Our small acreage (just under 4 acres) seems infested with all sizes and colors of ants. Since 2004, when we purchased the property, we have tried not to use chemicals on our lawn, forest or vegetables, but now the ants are about to overrun us! The little, common "sugar ants" get in the house, but we have smaller ants and the larger black and red ants outside as well.

We have tried lemons, cornstarch, and cucumber peels inside, as well as

just plain keeping surfaces clean. We have recently put some Eco-granules outside in the ant trails and around the house, but as yet have noticed no significant decrease in population. If you happen not to be looking and step near the bed, your feet are immediately covered with stinging ants. What can we do safely, organically, and sustainably to control these critters?

From Kelly: *We have a 30-acre mostly organic farm with horses and gardens. We like to stay away from using any poisons, pesticides, or herbicides. Do you know a safe way we can get rid of fire ants? We've tried boiling water on the anthills near the house, but it's not feasible to carry boiling water all over our property. I've researched some available treatments, but none of them are completely nontoxic. Thank you!*

Dear Linda and Kelly,

First, I have to tell you that fire ants and regular ants fall in two distinctly different categories. Please note that ants are industrious creatures who aerate the soil, help recycle dead bugs and animals, are themselves food for other creatures, and are part of the incredible web of life. That being said, I doubt I will ever find a soft spot in my heart for fire ants.

We'll talk about regular ants first. Ants are seeking food and water. In the house, you want to keep all surfaces clean of food particles, and fix any water leaks. Once ants find a supply of food or water, they leave a scent trail for their nest-mates to follow straight back to the mother-lode...your kitchen counter, under your sink, or the cookie crumbs in your child's bedroom. Follow the trail of ants to find out where they are coming in, remembering to check around water pipes. Some sites recommended deterring the ants by spraying a natural citrus cleaner or Dr. Bonners Peppermint Soap to mask their trail (spray the cleanser/soap on the trail and don't wipe off). Seal their entry points with caulk or expandable aerosol insulating foam. Alternatively sprinkle the entry site, especially vertical surfaces, generously with talcum powder. Cut any plant material away from your home, so that ants cannot use it as a bridge to enter your home. Pull mulch back from the house so it is not providing a hospitable habitat for ants.

move at walking speed in open ground so if the bush isn't too high, it covers several acres a day if the operator is that ambitious. Close trimming around plants will be slower. With larger trees a chainsaw is needed but the brush cutter can mulch the smaller branches that are too small for firewood. They are popular with Christmas tree growers for weed management and even harvest with addition of a large circular saw blade.

The best way to decide if one of these devices fits your farm is to rent one of the more modern versions. Asheville Rental in Woodfin on Riverside Drive has a DR brand with a great price for the weekend. To purchase one the price appears to be between \$2000 and \$3500. The web site for this brand is:

http://www.drpower.com/Field-Brush-Mower_Walk-Behind_Gallery.aspx

Home Depot tool rental in Oakley has the Billy Goat brand, for roughly the same price. It's site is:

<http://www.billygoat.com/site/intro.aspx?pid=18>

Your neighborhood equipment rental place may have something similar. I would try both before making a purchase. You might find that rental is the way to go if you only need it a few times a year.

Earth Tools which exhibits at the Organic Growers School has a brush cutter attachment for a BCS in the \$800 to \$1500 range. I have not used this one but I love my BCS walk-behind tractor and all the attachments that I own. I suspect it will work well. http://earthtoolsbcs.com/html/bcs_implements.html

The last photo illustrates that you can keep going up in size and destructive potential (search on land clearing equipment) I suggest caution if you use a machine like this anywhere near your house. You could lose the kitchen before you get your foot off the gas.

Happy Farming!

-- Tom



Even though bait takes longer to work than products that kill ants immediately, **bait is the most effective tool** to use in eliminating ants. Ants will carry the bait back to the nest and feed it to other ants and the queen. If you just get rid of the ants that are parading across your wall (they usually show up just before company arrives), there are hundreds of thousands more in the nest ready to march in right behind them. According to Orkin, "worker ants may live as long as seven years and the queen may live as long as 15 years." You want *slow-acting* bait so the ants will remain alive to carry the bait back to the nest and successfully contaminate quantities of ants. Studies show that **Boric Acid formulas achieved 95 to 100% control** (including fire ants) **within 8 weeks**, and possibly in 3-4 weeks. See Tips For Effective Ant Baiting at <http://www.ces.ncsu.edu/depts/ent/notes/Urban/antbait.htm>.

Bait recipes: *Keep all baits/poisons away from food, drinks, pets, children, and wildlife.* All baits must be kept fresh and moist. It is recommended that you change the recipe/product occasionally (from honey to molasses in homemade formulas, for instance) so the ants continue to visit your bait trap with enthusiasm. **To determine whether the ants are sugar ants or meat ants**, set out separate blobs of peanut butter and jelly and see which food the ants prefer. Direct exposure of boric acid bait material to garden soil may cause an excess of boron in the soil.

Recipe: Mix 1/8 teaspoon boric acid (available at drug stores) or 20 Mule Team Borax (grocery stores) with 7 teaspoons of bait material. **For sugar ants**, use something sweet (honey, jelly, molasses, syrup, sugar) for the bait material. **For meat ants**, use fish oil and grease for the bait material. Mix boric acid with bait material, put in a jar lid or bottle cap, and place along an ant trail. The larger scale recipe is 1 tsp. Boric Acid to 1 cup (up to 2 cups) bait material.

OR...Mix 1/3 cup Molasses, 6 Tablespoons Sugar, and 6 Tablespoons Active Dry Yeast. Spread on a plastic lid near on *outdoor* ant bed, or on a cardboard strip along an *indoor* ant trail.

Commercial products like Terro® (in grocery stores) or Drax® are also effective boric acid baits. I have uses Terro® for years.

Repellants won't get rid of ants, but they will drive them off. Herbs that repel ants include mints, tansy, rosemary, and pennyroyal. Mint is often found planted near doorways of old houses because of its reputation for repelling ants. After ants colonized my new mailbox, I kept sweeping the ants/ant eggs out of the mailbox so the mailman wouldn't balk at delivering my mail. On a whim I put a bunch of fresh rosemary clippings in the back of my mailbox. The ants disappeared overnight, and did not return until months later when the rosemary got too old.

Ants also feed on the sugary material secreted by aphids and other insects called honeydew. **Barriers** to discourage or prevent their movement include a band of sticky material (such as petroleum jelly, tape, or Tanglefoot®) or talcum powder and can be applied to the base of plants, trees and at other points of entry. Once the sticky material is dust covered, it must be replaced to be effective.

Instant grits, cucumber or orange peels, boiling water...there are lots of **home remedies** for ant problems. You have already tried a few of them. Here is an updated link to experiments about various remedies and their effectiveness http://www.extension.org/pages/Museum_of_Novel_Fire_Ant_Control_Methods_and_Products. Kelly, I doubt there is a "completely non-toxic" solution other than water, but gently pouring three gallons of boiling water on ant beds did result in a 60% population reduction (use extreme caution with hot liquids and angry fire ants).

Although fire ants have been spotted in the two most western counties of Western North Carolina, most of the mountain counties are free of fire ants. Encountering fire ants will provide you with an unforgettable experience, and some people are highly allergic to their bites. I grew up around fire ants and consider approaching a fire ant bed only with extreme caution. When weeding garden beds, you have less than half a chance to pull that weed, before fire ants are rushing up your arms – at the speed of light - biting fiercely as they go... and you cannot weed that spot again for hours (maybe days). Yes, the bites feel like fire and fire ants are beyond aggressive! Fire ant bites look like a pimple with a whitish head on it by the next day. An Extension agent I know in New Orleans says...the only time he ever took his pants off in public involved fire ants.

The **red imported fire ant** came to the USA in boat cargo from Brazil around 70 years ago. It out-competed the imported black fire ant, and the native Texas red fire ant (not considered a pest). The Brazilian fire ant is not considered a pest in Brazil because they are kept in check by natural predators. No natural predators exist in the USA, but work is in progress using a fly that decapitates fireants, and other biological controls ~ including Fire ant disease (*Thelohania solenopsae*) and different nematodes. On the up side, fire ants are actually considered a beneficial predator in some crops, such as sugar cane and cotton, and they will help reduce tick populations. That is little consolation to landowners infested with fire ants. These aggressive



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

2011 Spring Conference



Its time to mark your calendars! The 18th annual Organic Growers School Spring Conference is scheduled for March 5 & 6, 2011 at the University of North Carolina at Asheville. Join over 1500 farmers, gardeners, chefs, activists, and conscious consumers for the southeast's largest sustainable living conference. Workshop schedule will be released at the end of this year, and online registration will open January 1, 2011. See you there, green thumb!

Interested in sponsoring the conference, or exhibiting? Contact Meredith McKissick at 828.582.5039 or meredith@organicgrowersschool.org

ants have become such a scourge in most of the southeastern USA, and parts of the southwest, that many eradication methods take on a tone of frenzied desperation.

Individual bed treatments are preferred over broadcast treatments for fire ant control, because native ant populations are *less* compromised in the process. Target the mound and an area 1-3 ft around the mound. Fire ants are best treated on cooler, sunny days and treatment is *least* effective during the hottest part of the summer. Ants will often desert the treated mound and just build another mound nearby; so long term effectiveness is an issue.

Because allowable substance rules frequently change, Organic Growers School cannot vouch for any recommendations as certifiable. Please note that Certified Organic growers should always check with their certifier *before* applying any product. As I understand it, fenoxycarb products, such as Award Fire Ant Bait, are no longer allowable for organic growers. **Spinosad** products have shown some success against fire ants.

Mound Drenches for Fire Ants: Entrust® (spinosad), Monterey Garden Insect Spray (spinosad & OMRI), Greenlight Fire Ant Control with Conserve® (spinosad), Safer Brand Fire Ant Killer (citrus-peel based), and Citrex ® Fire Ant Killer name a few products. Some are approved for home use only. Clove oil, thyme oil, and citrus-peel concoctions were all mentioned as possible mound drenches.

Baits for Fire Ants: Ferti-lome Come and Get It (OMRI), Ortho EcoSense Brand Fire Ant Bait Granules, and Safer Fire Ant Control Kit are baits mentioned as organic alternatives, possibly certifiable. Boric acid baits, as discussed above, are also recommended for fire ant control. I didn't see any mention that boric acid baits are OMRI approved, but they are relatively effective and safe when used properly.

Other Options: Insecticides such as **rotenone**, **pyrethrins**, and pesticide-grade/food-grade (not swimming pool grade) **diatomaceous earth**, can act as mound treatments, but the product must come *in contact with and kill the queen(s)* to control ant colonies. Many of the tests I reviewed did not give high marks to diatomaceous earth, and it should be applied only during periods of dry weather to be effective.

Some of the mentioned products are available locally at area garden centers, like Reems Creek Nursery or Fifth Season. Some are available through Johnny's Selected Seeds, Peaceful Valley Farm Supply, or other on-line sources. **See these useful links for additional information regarding ant control.**

Organic Growers School Disclaimer: Rules and regulations are always in a state of flux. Organic Growers School makes no claims about any product ~ as to it's effectiveness or that it is certified for organic production, and assumes no responsibility for dangers involved in handling pesticides or ants. Read and follow all safety and labeling recommendations for any product you use, and always exercise caution in proximity to ants.

Best of luck with the ants,
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 where she blogs at <http://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.
Ask Ruth © 2010 Ruth Gonzalez & Organic Growers School



basket-making with wild-harvested materials at the 2010 conference



children make terrariums at the 2010 conference kids program



Learning to "eat your weeds" and other plant tips at the 2008 conference

News Bits

News Bits are reader submitted events and/or info. Submit your bit to:
enews@organicgrowersschool.org

Last month, Ruth Gonzalez addressed alternatives to RoundUp in her Ask Ruth article. The following is a most helpful response from a reader in North Carolina:

Regarding suggestions for the lady with the overwhelming weed problem (below), Ruth might wish to suggest horticultural vinegar (20% as opposed to household 5% acidity) -- available (I believe) from Ron Juftes at Seven Springs Farm. Ron also carries the Burnout product that she mentions, and one or two other natural herbicides (see www.7springsfarm.com). He also carries ThermX-70, a yucca-based, OMRI-listed sticker-spreader.

Also, at Piedmont Biofuels located in Pittsboro, NC, a product called Ecoblend is being made. See <http://www.ecoblend.us/blog/> for results from using this product and also for the link to be able to purchase.

-Jackie Hough
Raft Swamp Farms
Red Springs, NC

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