Sustainable Agriculture at UGA

Looking forward for this generation and the next...

Spring 2012

Farewell to a Friend

Some people prefer to stay in the background, but are often the glue that holds things together or the oil that keeps things running smoothly. They are the ones who look after the details, all the things that make programs successful. They are often the people that are an important contact within a community. They solve problems.

Sustainable agriculture lost one of these people recently – Joy Schomberg. Joy was the Georgia SARE Program Assistant for five years. She is the one who worked out the details and problems with the scholarships for the Southern Sustainable Agriculture Working Group Conference. She planned out the details of the SARE Farm Tours so busses didn't get stuck and everyone had water out in the hot field. She organized many of our sustainable agriculture workshops, organized to the point of a list of lists and a travel box with everything from duct tape to markers, pencils, extra name tags, paper clips even safety pins.

Joy loved agriculture and its people. She volunteered for years with the Georgia Conservation Tillage Alliance. She put out their newsletters and maintained their membership lists and in the process made sure that farmers interested in conservation tillage stayed in touch with each other and experts who cared about what they were doing. She was active in Georgia Organics and helped connect the dots in this community. She always had time to ask about how someone was, how their crops were, what they were interested in, and she never failed to thank them for their efforts.

Joy passed away on March 4 after an extended struggle with cancer. She was a great colleague and a dear friend. We will all miss her.

Certificate of Organic Agriculture

The Certificate Program in Organic Agriculture at The University of Georgia is rapidly growing and drawing students from a range of disciplines. This new program graduated ten students this past December and currently have sixty-five enrolled in the program. Students take a mixture of courses to provide them with a foundation

of science, philosophy, and hands-on experience in order to produce organic food.

The Certificate is different than most in that it emphasizes experiential learning both in the classroom and on the UGA certified organic farm.

Student Daniel White working with herbs in a water efficient gutter-system.

The organic farm is a two-acre area with field plots and a greenhouse at the Horticulture Research Farm in Watkinsville, Georgia. This farm provides space for learning opportunities with faculty and for students to perform individual research projects. All of the food produced from the farm is donated to local non-profit organizations or sold to the University of Georgia Continuing Education Center. For more information and to donate to the program, visit the certificate's webpage, http://organic.uga.edu/.

Kate Munden-Dixon, SARE Program Assistant

Dr. David Knauft, Organic Agriculture Certificate Program Director

Grower's Corner

Timely Frost and Weather Predictions for Farmers

The Georgia Automated Environmental Monitoring Network is a network of automated weather stations operated by the University of Georgia that provides real-time observations of temperature, humidity, wind, and solar radiation at 81 mostly rural locations around the state. The first three stations started taking measurements in 1991, and the network has grown steadily since. Weather and climate data for each station can be found at http://www.georgiaweather.net.

In addition to the current weather conditions and historical data that are available, the website offers a variety of ***online tools*** that can be used to manage crops and livestock, make decisions about harvest, and highlight the potential for problems with diseases and pests.

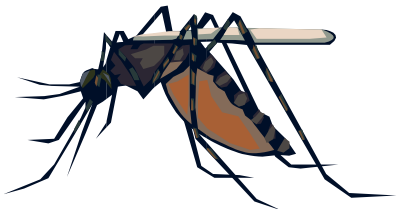
One of the most useful tools on the site is the ***12-hour real-time predictions for air temperature and dewpoint temperature***, which is a measure of humidity. These predictions are made using advanced computer technologies to provide guidance for when temperatures are likely to dip below critical thresholds like 32 °F up to twelve hours ahead. This gives you time to get protective measures in place before frost damage is severe. The predictions are updated every 5 minutes based on the latest weather observations.

The site also provides predictions for cold duration and estimates of the minimum overnight temperature that is expected.

Pam Knox, UGA Applied Climatologist
Faculty of Engineering

Will This Mild Winter Mean More Insects This Summer?

Insects are durable – winter never kills them all off. But there are differences in numbers that survive truly harsh winters – with long periods of freezing temperatures – and numbers that persist through mild winters (such as we are currently experiencing).



Here in Georgia we never have temperatures that are severe enough to have much impact on insect populations. Think about those warm days in any winter when insects are out and about despite snow a week earlier. They have hunkered down and waited out the cold, then emerged to enjoy the warmth when it returned.

Some insects have antifreeze in their blood, which allows them to survive subfreezing temperatures with no damage.

Mosquito larvae can survive just fine under a sheet of ice covering their pool. So it's time to start checking for containers that hold water around your property. Is there a bucket or tarp out there with a few cups of water in it? Dump it and put it where the next rain won't fill it. Female mosquitoes are already looking for a place to lay their eggs and you don't want to encourage them around your house.

Most insects have the ability to seek out warm spots to spend cold nights, either under the bark of trees or in cracks around our homes. One good place to hide is the crawl space under buildings, where temperatures almost never reach freezing. Another is culverts. Storm drains provide a cave-like habitat that protects insects from low temperatures (and also provide a cool retreat on sweltering summer days).

A milder winter probably allows a higher proportion of an insect population to survive, thus giving it a head start on building up numbers in the spring. But by mid-summer there will not be a noticeable effect on insect populations – we'll just have a lot of bugs as usual!

Dr. Nancy C. Hinkle, Professor of Entomology

Research

Organic Tomato Variety Trials – And the Winner Is…

A recent organic tomato trial at the UGA Horticulture Farm has identified an Italian heirloom variety with an exquisite taste for organic cultivation methods. In 2011, University of Georgia horticulture professor

Dr. George Boyhan and graduate student Jeffrey McConnaughey compared 10 heirloom tomato varieties, 5 commercial hybrids, and 5 experimental varieties. The tomatoes were grown using plastic mulch, with liquid fish fertilizer applied via drip irrigation prior to fruit ripening. The plants were staked and tied, but not pruned. Tomato fruit were harvested by hand, sorted into USDA size and quality classes, and then weighed. Some of the fruit were used to evaluate taste among Horticulture Farm staff and participants in a regional tomato festival. Finally, recent wholesale prices were used to estimate the revenue potential of each variety per acre.

As was expected, total yields of large, USDA #1 fruit were highest among the commercial hybrids 'Mountain Fresh Plus' and 'BHN 602', and all five commercial varieties tested achieved high total yields of all USDA #1 fruit (large and medium combined). Heirloom varieties 'Neptune' and the Italian 'Costaluto Fiorentino' also achieved comparably high total yields of USDA #1 fruit, though neither of these produced many large-sized fruit, which is why heirloom tomato varieties are normally suckered and pruned to some degree. These seven varieties also achieved high early yields (first two weeks of harvesting), as did heirloom varieties 'Ozark Pink' and 'Crnkovic Yugoslavian'. Uniquely, the Yugoslavian heirloom produced 95% of its entire marketable yield in the first two weeks of harvesting, easily the most concentrated fruiting period in the experiment.

Not surprisingly, heirloom varieties dominated the top half of the taste test results. Heirlooms 'Jeff Davis' and 'Crnkovic Yugoslavian' the highest, with 'Costaluto Fiorentino', 'Cherokee Purple', and an experimental variety not far behind. Commercial hybrids 'Mountain Fresh Plus', 'Celbrity', and 'Scarlet Red' were next, each scoring slightly above average. Surprisingly, heirloom varieties 'Neptune', 'Druzba', 'Red Mortgage Lifter' and 'Abraham Lincoln' all scored below average in the taste test.

Tomatoes grown at the Horticulture Organic Agriculture Farm

Because heirloom varieties (that taste good) can be marketed for higher prices than ordinary organic tomatoes, the heirloom variety 'Costaluto Fiorentino' was projected to achieve the highest amount of revenue from wholesale markets. The only other heirloom variety predicted to even be profitable was 'Neptune', but with its below

average taste results, this variety may be hard to effectively market as an heirloom. Along with the Italian heirloom, each of the commercial varieties was also predicted to attain over $10,000 or more (net) revenue per acre except 'Scarlet Red'. The experiment is being repeated in 2012 to confirm their results.

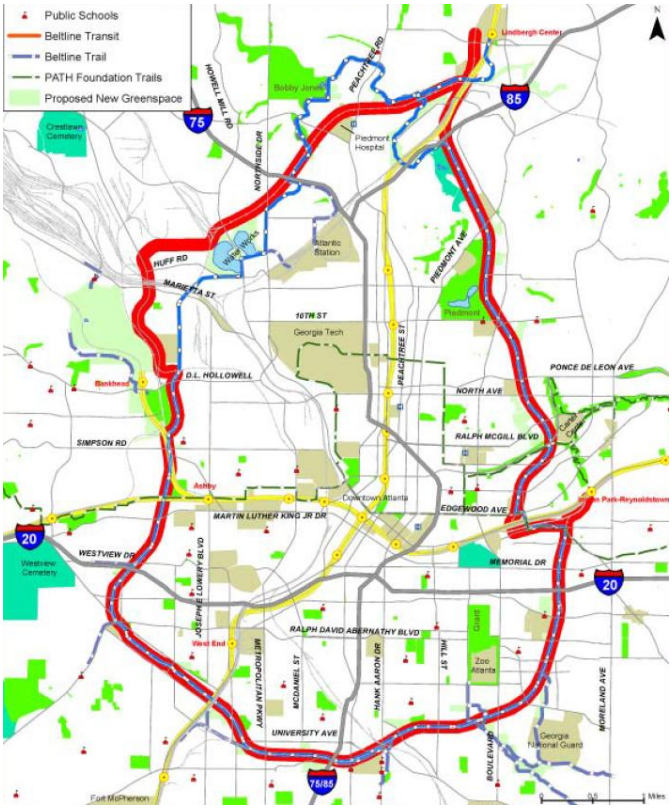
Jeffrey McConnaughey, Graduate Student
Dr. George Boyhan, Sustainable Vegetable Production Specialist

Extension

Farming in Atlanta

Atlanta may become the nations' fresh food capitol as city farms and neighborhood community gardens supply fresh vegetables and fruits to residents. Reducing transportation miles limits emissions while providing food at its peak freshness. Additional environmental and social benefits abound: soils are becoming revitalized, neighborhoods are being transformed and fresh food is becoming available to everyone regardless of where they live.

The University of Georgia College of Agricultural and Environmental Sciences is assisting the Atlanta Beltline, a twenty-two mile redevelopment project that will circle the city, with ensuring the land that will produce food will do so that is both environmentally and economically sustainable . The College is working with Atlanta Mayor Kasim Reed, businesses, foundations and nonprofits to provide soil testing, technical assistance in managing storm water and developing irrigation systems, as well as business plan development needed to cultivate farms and community gardens on the Beltline.



Map of the Proposed Beltline
(Photo courtesy of Atlanta Beltline)

Growing food on city lots can offer additional challenges due to previous land uses and ensuring the food is safe to consume. Converting industrial and brownfield areas into gardens and farms requires soil testing and possible remediation to provide clean, healthy soils for plants. Proper design that limits storm water run-off and utilizes rainwater catchment is a necessity. County extension agents are providing science-based

knowledge to the various organizations and partners in Atlanta on these topics to help bring more opportunities for residents of Atlanta to see and participate in food production. While the Beltline will provide a central coordinated effort to increase access to fresh, nutritious vegetables and fruits, the larger goal is to increase community gardens and backyard gardens throughout Atlanta.

Susan Varlamoff, Office of Environmental Sciences Director

Remember to check out

SustainAgGA.org

for current events and new information

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