Hi Folks,

I enjoyed seeing some of you recently at the Putting Small Acreage to Work classes. We had a total of 49 participants, over the course of six classes. If you missed any of the classes but would like information about the topic(s), you’re welcome to contact me.

As many of you are aware, I’m working with agents from four other counties to put together a Piedmont Agriculture Map, to let the public know where they can find farms that sell directly to the public. If you want to be on this map and can’t find the application, let me know by Dec. 18, as I expect to leave for vacation shortly after that date, and an application deadline of Dec. 31 has been set.

It’s time to think about what we will do next year. Some ideas for class or demonstration topics, in the area of commercial horticulture, are good agricultural practices (i.e., fresh produce safety), landscaping equipment, plants that perform well in this area, blueberry pruning, more small acreage options (specialty melons, tomato grafting, ??), composting, cover cropping, and formation of a grape growers group. Please let me know what you think of these ideas and what ideas you have!

Regards,

Mary Helen Ferguson
Horticulture Agent
maryhelen_ferguson@ncsu.edu

Notes

Discover NC Agriculture Map

North Carolina Agritourism Networking Association is putting together a map of agritourism farms in NC. (Note: This is different from our Piedmont Agriculture Map.) I definitely encourage relevant farms to participate, as I expect that this one will be distributed statewide. It appears that there is no fee to participate. However, I was informed that applications must be postmarked by Jan. 9. Application and more information:

http://www.ncagr.gov/markets/agritourism/index.htm

Farmers Markets Seeking Participants

(a) Western Wake Farmers Market at Amberly (Cary): Looking for farms within 75 mile radius. More info: mia_south@yahoo.com or 919-380-4035.

(b) Carolina Brewery & Grill – Pittsboro: Looking to start market in spring 2009. More info; robert@carolinabrewery.com or 919-545-2330.

(c) South Estes Farmers Market (Chapel Hill): Looking for farms within 60 miles of Hillsborough. More info:

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Grafting Tomatoes

I recently attended an Heirloom Tomato Grafting Workshop, which turned out to be one of the most exciting educational events I’ve been to during my time as an extension agent. Why would a person want to graft tomatoes? Here are two possible reasons: (1) greater resistance to soil-borne diseases and (2) greater yields from not-so-vigorous tomato varieties.

Faculty and graduate students at NC State University have been doing research on grafted tomatoes for several years now. They are looking at heirloom varieties grown by organic methods. Grafting may be particularly relevant to heirloom tomato growers, since, well, there are reasons that heirloom tomatoes are “heirlooms”—they may be more susceptible to diseases, not yield as many tomatoes, or not have as long of a shelf life as modern varieties. Grafting doesn’t solve all of these problems, but it does have the potential to help growers manage diseases that infect plants through their roots and to help attain higher yields.

The reason that this technique may be particularly helpful to organic producers is that it offers another “non-chemical” way to manage disease. The technique may also be especially helpful to people who find it hard to rotate their crops frequently or do not have a long crop rotation cycle (e.g., due to having a small amount of land or growing tomatoes in a stationary greenhouse or high tunnel) and thus have problems with soil-borne diseases. Actually, any grower who wants to reduce pesticide use or avoid having to use soil fumigants may find grafting useful.

Silicone clips used for grafting. These are available in 1.5 and 2.0 mm sizes from HGI Worldwide, Inc. (www.hydrogardens.com) from Hydro-Gardens and Johnny’s Selected Seeds (www.johnnyseeds.com). The 2.0 mm size may be better suited to tomato grafting.

Two sets of transplants are needed: one set of rootstock plants and one set of scion plants. A razor blade can be used to make cuts.
Tomato rootstocks have been identified that, in North Carolina experiments, showed no evidence of disease even when other tomato plants did. Pests for which resistant rootstocks have been identified include bacterial wilt, fusarium wilt, Southern stem blight, and rootknot nematodes. Different rootstocks are resistant to different diseases, so it’s important to know what problem you have before selecting a rootstock. It should be noted that less disease does not always result in a greater marketable yield, so the degree to which diseases affect marketable yield should be taken into consideration. Growers should also consider the value of increased yield in relation to the cost of producing or buying grafted plants.

How is tomato grafting done? Two sets of transplants—one set of the plants from which you want fruit (the scions, or “top parts”) and one set of the rootstock plants—are grown or obtained (there may be a business opportunity for someone to produce grafted transplants to sell to others). When the transplants have 2 – 4 leaves, use a razor blade or other very sharp tool to cut the stems so that the widths of the stems at the location of the cuts are approximately the same for the scion and rootstock. (The angles at which cuts are made need to be very similar—this shouldn’t be a problem if one person makes all of the cuts and keeps their hand at basically the same angle.) Then, slide a silicone grafting clip (commercially available) over the end of the rootstock stem and insert the scion stem into the clip, so that the stems meet and fit together snugly. The plants are then put into a healing chamber with little or no light, high humidity (85 – 95%), and a temperature of 75 – 80°F. Humidity can be provided with a cool-mist vaporizer [placed under a table] or a passive humidifier. Avoid applying water on top of the leaves. Reduce humidity and increase light gradually, starting after 2 – 5 days. It takes approximately 16 days for the plants to heal completely, and clips eventually fall off by themselves [and can be reused after they’re cleaned]. For more how-to information, you can check out this publication: http://www4.ncsu.edu/~clrivard/TubeGraftingTechnique.pdf. You’re welcome to contact me for more information about which rootstocks are resistant to which diseases, which may increase yields due to their vigor, where to get seeds and materials, and other questions.

![Grafted plants, with their clips, ready to go into the healing chamber immediately.](image-url)
Notes (continued from p. 1)

New Publications

(a) Field Production Of Nursery Stock: Field Preparation, Planting, and Planting Density, AG-701W: http://www.ces.ncsu.edu/depts/hort/consumer/ag_publications.html
(b) Incorporating Insecticide at Cultivation Reduces Insect Damage in Sweetpotato, AG-703: http://www.ces.ncsu.edu/xrdb/display.php?material_id=20438
(c) Reducing the Risk of Corn Wireworm Damage in Sweet potato, AG-704: http://www.ces.ncsu.edu/xrdb/display.php?material_id=20441

Farm Bill 2008 Assistance for Organics

(a) Environmental Quality Incentives Program (EQIP) money was designated by the Farm Bill to help farmers transition to organic production. Contact the USDA Natural Resources Conservation Service office (336-629-4449 x3) for more information.
(b) NC Dept. of Agriculture & Consumer Services, through USDA funding, is offering to pay up to 75% (no more than $750) of the cost for organic certifications done between now and the end of next September. Contact me (Mary Helen) or Kevin Hardison (Kevin.Hardison@ncmail.net or 919-733-7887) with NCDA&CS for an application or more information.

Farm to Fork: NC State University Center for Environmental Farming Systems’ New Local Foods Systems Initiative

Are you interested in helping NC have a stronger local foods system—e.g., have more locally produced foods available and make it easier for farmers to sell their products locally? To join the e-mail listserv and stay in the loop, send an e-mail to nancy_creamer@ncsu.edu. I’ll be attending a regional meeting in Winston-Salem on Dec. 10, and a statewide summit is planned for March 2 – 3. More info: www.cefsfarmtofork.com

Research Stations Hearings

Are you interested in the future of our state's agriculture research stations? A hearing will be held in Raleigh on Dec. 16, at 6:00 p.m., at the following location: http://www.ces.ncsu.edu/wake/directions.pdf Hearing will also be held in Plymouth (Dec. 10, 6:00 p.m.) and Waynesville (Jan. 14, 1:00 p.m.).

2008 NC Urban Forestry Conference Presentations Available

If you didn't get to go to the 2008 NC Urban Forestry Conference but are interested in what was taught, you can access [at least some of] the presentations from the conference here: http://www.ncsu.edu/feop/Agenda2008/urbanforest/agenda.html

2008 Agricultural Water Use Survey

We were asked to encourage you to participate in this survey, which will be sent by mail at a later date by the NC Dept. of Agriculture and Consumer Services. More information: http://www.ncagr.gov/water/index.htm
Upcoming Events

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Events will be announced via the e-mail listserv and in next year’s newsletters.

Statewide and Regional

2009 Chatham Beekeeping School

Southeast Regional Fruit and Vegetable Growers Conference
Jan. 8 – 11, Savannah, GA. More info: http://www.gfvga.org/

NC Turfgrass Short Course

NC Blueberry Council, Inc., 43rd Annual Open House

Green and Growin’ Trade Show (NC Nursery and Landscape Association)

Practical Tools and Solutions for Sustaining Family Farms Conference (Southern Sustainable Agriculture Working Group)

Mid-Atlantic Horticulture Short Course

NC Turfgrass Conference and Show

NC Winegrowers Association Annual Conference

Winter Vegetable Conference and Trade Show (NC Tomato Growers Association)
Feb. 18 – 19, Asheville(?). http://www.ncagr.gov/markets/commodit/horticul/tomatoes/ (not much information is available here yet, but I expect more will there be later).

Northern Piedmont Specialty Crops School
Feb. 27, Roxboro. More info: http://person.ces.ncsu.edu (see “Events” section) or 336-599-1195.

Statewide Local Foods Summit
Don’t forget to sign up for the Randolph Growers e-mail listserv for more frequent updates related to horticultural crops production and the landscape industry.

E-mail Mary Helen (maryhelen_ferguson@ncsu.edu) to get on the mailing list.

Heirloom tomatoes. An article about grafting tomatoes onto disease-resistant and vigor-enhancing rootstocks is inside. This technique may be especially relevant to growers of heirloom tomatoes and organic tomatoes, and those who have difficulty rotating their crops. Photo courtesy of Jeanine Davis’s research group (NCSU).