What’s new?

Opportunities with Tomatoes and Organics

On Monday, August 27, 2007 from 3-6:30 PM, NCSU will be hosting a field tour of their research study comparing production of two heirloom tomato varieties with two new heirloom-type hybrids developed by Dr. Randy Gardner. The tomatoes were grown in four production systems:

1) A conventional system using synthetic fertilizers, fungicides, & insecticides;
2) The Brandt ClawEl Organic System using their newest OMRI approved products;
3) NCSU’s “Leek Organic System” utilizing Serenade and Neem; and
4) A control using no fungicides or insecticides.

Also, included in the tour is a tomato taste test, a light dinner, featuring tomatoes, and a presentation on how to grow trellised heirloom tomatoes and organic products. The tour will take place at the NCSU Mountain Research Station, 265 Test Farm Rd, Waynesville, NC.

For more information, contact Jeanine Davis or Laura Duffie at 828.684.3562.

TN Agricultural Enhancement Program– Producer Diversification Cost Share Program

Applications must be postmarked by August 31!

Time is running out to apply for the TDA Producer Diversification Cost Share Program. The purpose of this program is to increase farm income in Tennessee by encouraging producers to expand and improve their operations through production of diversified agricultural products. This goal will be achieved by providing cost share funds for farmers to install farm infrastructure, purchase specialty equipment and market their diversified farm products. Diversified agricultural products include agritourism, aquaculture, bees, fruits & vegetables, goats & sheep, horticulture, organics, value-added products, viticulture, and others as approved by the TDA. Producers can apply for reimbursement of 35% cost share, up to the maximum, for activities or items within 3 funding categories. The maximum cost share available per producer is $10,000 per fiscal year. Producers may submit only one application per fiscal year.

New this year! Producers meeting special requirements in the priority areas of Agritourism, Goats & Sheep, Organics, and Viticulture are eligible for reimbursement of 50% cost share, up to the maximum of $15,000 per fiscal year.

Hurry! Applications must be postmarked by August 31! Additional application details and examples of acceptable cost share activities for each priority area can be found at: www.state.tn.us/agriculture/ enhancement/growth.html.

Weather Report

More hot days are on the way. High’s for the upcoming week will remain in the 90’s, with low’s in the upper 60’s to low 70’s. However, we could see some desperately needed rain showers as early as later tonight in Western Tennessee. Slight chances for scattered thunderstorms will continue across the state for the rest of the week. Nonetheless, the drought continues.

UT Extension has created a Drought Resources web-page with links to and information on fruits and vegetables, as well as landscape, forestry, dairy, and livestock and forage information. You can reach this page from the UT Extension home page, under the heading ‘News & Highights’, or at:

Question of the Week

Q: I got a call from a grower yesterday who thinks he has a new variety of watermelon. He planted 'Moon and Stars' and says it is ½ yellow and ½ green. He wants to document and develop it. What are the requirements to do this? How many generations to be a true variety? —D.Q.

A: For help with this week’s answer on what it takes to develop a ‘new’ variety, I turned to Dr. Linda Beaver, the University of Puerto Rico cucurbit breeder. The heirloom variety ‘Moon and Stars’ is an open pollinated (OP) cultivar, meaning that the seed you buy is produced without any controlled pollination (except that it should be produced in isolation from other watermelon cultivars). Since watermelon is naturally cross pollinated, ‘Moon and Stars’ is not a pure line. It is a mixture of genotypes that have similar phenotypes. In other words, it is like you and your siblings—you share many genes and you might look somewhat alike, but you are not exactly the same. So, it is normal to expect the progeny of ‘Moon and Stars’ seed to be both genetically and phenotypically variable. Normally you see varying degrees of yellow spots (“moon and stars”). I am not sure what is known about the genetic control of this trait, but it is likely somewhat complex. The varying degrees of spots represent both genetic and environmental variability. Finding a ½ green, ½ yellow fruit is probably not that unusual. What can the grower do with what he has? First, there is nothing wrong in doing repeated generations of selection and trying to develop something new, but it will be a long process. He would start by growing plants from the seed of the ½ green, ½ yellow fruit that he has. In all likelihood, the appearance of these melons will be variable. If he finds none with fruit like the mother (½ & ½), I would tell him to stop there. It is possible that the trait is completely recessive and that it could be recovered in a later generation, but this becomes pretty complicated for someone who doesn’t have any training in plant breeding. If he does see a number of ½ green, ½ yellow melons, then he could attempt to begin to self-pollinate those selected plants, and continue to select plants with ½ green, ½ yellow melons and self-pollinate them for a number of generations. It takes about 5 – 6 generations to get a more-or-less pure line (a LOT of work). Then you would need to test whether the final product is worth trying to sell. Another simpler approach would be just continuous mass selection (like farmers have been doing for 10,000 years). This means harvesting the seed from the ½ green, ½ yellow fruit and planting it again the next year then selecting seed from the plants that produce ½ green, ½ yellow melons, again, and so on and so forth. But that would not give you a pure line. Only a pure line could be protected with a Plant Variety Certificate or patent.

Crop Report

Sweet corn harvesting is coming to an end for some folks. But it’s never too early to think about next year and record what happened this year so you don’t repeat the same mistakes. We finished our sweet corn harvests in the UT variety trials, and we learned some lessons. First, while everyone likes to get a jump on the market, it doesn’t always pay to choose an early maturing variety (see photos on left). If you are thinking of using an early maturing variety, make sure it was bred for the South. Early maturing varieties bred for the North are adapted to long, cool summer days and do not grow well here. Varieties adapted to the South respond to short days.

The other lesson we learned this year was always have an irrigation plan. Sweet corn is particularly susceptible to drought stress, with its relatively shallow root system. Generally, it needs an inch of water per week, but this must be adapted for soil type and weather conditions. For corn, during silking, tasseling and ear development, irrigation is particularly critical. Poor pollination during hot, dry weather results in sweet corn ears with “skips” along the cob and poor tip fill. These are quality issues that can make the difference between one-time and repeat customers. Poor tip fill is affected by variety choice, disease, stress, population density, as well as combinations of these. Some stresses, like heat, are out of your control, but others factors (varietal differences, onset of disease, etc.) can be monitored and managed to ensure an abundant harvest of quality corn. The more observant you that you can be in the field to subtle (or not so subtle) differences and changes, the more successful you will be.
Upcoming Events

TN Agricultural Enhancement Program– Producer Diversification Cost Share Program Applications accepted: July 2 - August 31 (postmarked)
The TDA is providing cost share funds for farmers to install farm infrastructure, purchase specialty equipment and market their diversified farm products. The maximum cost share available per producer is $10,000 per fiscal year. New this year! Producers meeting special requirements in the priority areas of Agritourism, Goats and Sheep, Organics, and Viticulture are eligible for reimbursement of 50% cost share, up to the maximum of $15,000 per fiscal year. Don’t miss out! Additional details at www.state.tn.us/agriculture/enhancement/growth.html.

Tennessee Regional Agritourism Workshops, 9:00 AM to 3:00 PM, August 21 (Nashville), August 27 (Jackson), and August 30 (Morristown). Contact Pamela Bartholomew at Pamela.Bartholomew@state.tn.us or 615.837.5348 or consult the latest volume of ‘Tennessee Agritourism Today’ (http://cpa.utk.edu/level2/agri-tourism/newsletter/agritouraug-07.pdf) for more information.

Opportunities with Tomatoes and Organics, 3:00 PM to 6:30 PM, August 27, 2007, NCSU Mountain Research Station, Waynesville, NC Get out in the field to tour a research study comparing production of two heirloom tomatoes with two new heirloom-type hybrids developed by Randy Gardner. Includes a tomato taste test, light dinner, and a production demonstration. For more information, contact Jeanine Davis or Laurie Duffie at 828.684.3562.

Domestic Kitchen: Tennessee Food Safety Certification Course, 8:00 AM to 3:00 PM, August 28, 2007, CST, Plateau Research and Education Center, Crossville, TN This course meets the requirements for rules of TDA Regulatory Services Division Chapter 0080-4-11, Regulations for Establishments Utilizing Domestic Kitchen Facilities for bakery and Other Non-Potentially Hazardous Foods Intended for Sale. With P. Michael Davidson and William C. Morris, Department of Food Science and Technology, University of Tennessee. Pre-registration is mandatory. Registration will be limited to the first 50 participants. You must pre-register with Nancy Austin by phone (865) 974-7717 or e-mail naustin@utk.edu. Enrollment fee is $100 per participant. The fee will include course materials and lunch.

SOLD OUT! Produce Inspection Training, September 24-28, 2007, Fredericksburg, VA The United Fresh Produce Association will announce 2008 dates soon. For more information, or to put your name on the waiting list, contact Beth Berman at bberman@unitedfresh.org.

Sunbelt Ag Expo- 30th Anniversary Show, October 16-18, 2007, Moultrie, GA For more information visit www.sunbeltexpo.com or call 229.985.1968.

International Irrigation Show, December 9-11, 2007, San Diego, CA For details, call 703.536.7080 or visit http://www.irrigation.org.

Tennessee Fruit and Vegetable Association Convention, December 9-11, 2007, Nashville Airport Marriott, Nashville, TN


3rd Annual Agritourism Conference: Cultivating Farm Revenue, January 17-18, 2008, Paris Landing State Park, Buchanan, TN. Conference details will be made available in the next few months and will be posted on the Center for Profitable Agriculture’s Web site at http://cpa.utk.edu.

SPROUTS: Supporting Producers through Research & Outreach at UT
Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences and resource development. University of Tennessee Institute of Agriculture, United States Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.