Commercial Horticulture: Future Cooperative Extension Programs, Business Planning and Crop Production Issues & Alternative Crops

This newsletter is intended for people interested in commercial fruit and vegetable production, business planning and North Carolina Cooperative Extension Service meetings throughout North Carolina. For back issues of this newsletter please go to the Jones County Extension website and click on the Commercial Horticulture, Nursery & Turf menu option on the left side of the website. The website address is: http://jones.ces.ncsu.edu

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Upcoming Workshops, Tours & Meetings

July 9, 2008. Twilight Tour: Vegetable Harvest Considerations. 6:00 PM – 8:00 PM. Leaders: Ken Fager & Steve Moore (NCSU). Workshop Registration: FREE. Call 919-513-0954 or email cefs_info@ncsu.edu to hold your spot. Registration is limited to 15 people per tour.

July 10, 2008. Fueling the Farm II: Managing energy risks, reducing energy costs and exploring alternative energy sources. 9:00 am – 4:30 pm. Center for Environmental Farming Systems (CEFS), Goldsboro, NC. Call 919-513-0954 or email cefs_info@ncsu.edu to hold your spot.

July 11, 2008. Biofuels 101: Hands-on Demonstration of Biofuel Production. 9:00 am – 4:30pm. Center for Environmental Farming Systems, Goldsboro, NC. Contact CEFS (cefs_info@ncsu.edu) or call (919) 513-0954 for more information. NOTE: Registration for both the July 10 and July 11 sessions are $80 – a $10 savings.

July 24, 2008. NC Specialty Crops Melon and Watermelon Field Day. Cunningham Research Station, Kinston, NC. 3:30 PM – 6:30 PM. Registration begins at 3:30 PM, program starts at 4 PM.

August 25, 2008. Developing Community Based Food Systems Workshop. 9:00 AM – 4:00 PM. Center for Environmental Farming Systems (CEFS). Goldsboro, NC. Contact CEFS (cefs_info@ncsu.edu) or call (919) 513-0954 for more information.

Note: CEFS has a number of very good programs planned this summer on a range of topics related to sustainable agriculture. Call CEFS or go to their Calendar of Events website: http://www.cefs.ncsu.edu/calendar2008.htm for more information.

Business Planning

By now I suspect many of you have heard about the 2008 Farm Bill getting passed in Washington, D.C. This is a major piece of legislation that like all major spending bills has its good points and bad, depending on your perspective.

The 2008 Farm Bill is the biggest, most influential piece of legislation that affects your operation. While many of you will never see the direct impact of this legislation, many of you will feel the affects – good and bad – from this legislation for years to come. It is for this reason I wanted to share with you some of the highlights from this bill. The full rundown is available online via the US House of Representative’s Farm Bill website: http://agriculture.house.gov/inside/FarmBill.html.
For most fruit and vegetable producers Title X of this bill discusses the changes to horticulture and organic farming programs that will affect you the most.

The synopsis of the Title X provisions are this:

**• Expands access to locally grown food**
- Expands activities covered under the Farmers’ Market Promotion Program, including the expansion of EBT systems at farmers markets.
- Provides $33 million to expand opportunities for direct producer-to-consumer marketing
- Expands producers’ eligibility to access funds in the program
- The Farmers’ Market Promotion Program provides competitive grants to improve and expand farmers markets, roadside stands, community-supported agriculture programs, and other direct producer-to-consumer market opportunities
- Establishes the Healthy Urban Food Enterprise Development Center and provides $3 million to help bring fresh foods into urban food deserts

**• Provides new funding to support organic farmers**
- Provides $22 million for USDA’s cost-share program
- Provides $5 million for organic marketing data collection and publication
- The USDA’s National Organic Certification Cost-Share Program defrays the costs that producers and handlers incur when seeking organic certification

**• Helps fruit and vegetable producers address food safety, pest and disease management issues**
- Provides $377 million over 10 years for pest and disease detection and control
- Directs USDA to develop assessments and establish priorities to combat pest and disease threats

Provides money and outlines a plan for new programs of joint action between Federal and State governments to provide for early detection and surveillance of plant pests and diseases

Establishes proactive, cooperative, audit-based certification systems between USDA, States, and growers to address plant pest infestations

Research title (Title VII) provision offers fruit and vegetable producers a new tool for cooperating in efforts to fight food-borne illness through a $23 million set-aside in the specialty crop research initiative for research on food safety hazards

**• Funds the Specialty Crop Block Grant Program**
Provides $466 million over 10 years to expand the specialty crop block grant program

The block grants are provided to states to support projects in research, marketing, education, pest and disease management, production, and food safety

**• Establishes and funds a National Clean Plant Network**
Provides $20 million to establish and operate the National Clean Plant Network

Develops a national source for clean plant stocks for horticultural crops

The program would help maintain plant stocks that are free from pests and diseases

Prepared by the House Agriculture Committee
Updated May 12, 2008

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**Crop Production**

**Tomato Plasticulture Production**

Tomatoes are one of many summer crops that home gardeners and farmers struggle to produce in the summer months. Assuming your tomatoes survive the onslaught of tomato spotted wilt virus, the next major issue you will encounter is high temperatures.
Summer has jumped on us in a big way in early June. With temperatures riding in the mid-90s, July/August like weather is going to have a serious impact on the performance of all vegetable crops that set blossoms. Reproduction in tomatoes and other flowering crops can be greatly reduced when temperatures exceed 86°F and are sustained for days on end.

Temperatures like this can leave growers in a quandary about when to plant tomatoes for fall following strawberries on plastic. The recommended planting date for fall tomatoes in eastern NC is August 1-August 15. Setting transplants before August 1 is likely to result in reduced fruit set because the tomatoes will be in a reproductive mode rather than a vegetative mode in the heat of August. This will lead to reduced flower set and ultimately reduced yield.

**Fusarium Wilt**

Fusarium is a devastating disease of fruit and vegetables which appears in numerous crops and numerous species. It affects multiple plant parts and can cause serious economic crop loss.

Fusarium species that affects Solanacea plants: tomatoes, peppers, egg plant, potato include *F. oxysporum* f. sp. *lycopersici* (tomato), *F. oxysporum* f. sp. *melongenae* (eggplant) and *F. oxysporum* var. *vasinfectum* (pepper). All Fusarium species and subspecies are soil borne and are specific to their host crops. Fusarium is a warm weather fungi that causes the vascular tissue of the crop to collapse, beginning in the youngest leaves and spreads throughout the plant. Because it starts in the youngest leaf growth, wilting is usually evident during the daytime and at night the plant will recover. This will continue until the fungi spreads far enough through the plant that eventually it does not recover during the day.

Because Fusarium is persistent in the soil and it is species specific, long crop rotations (3-5 years) are recommended. Field sanitation - removing infested plants from the field prior to harvest when possible - is a good preventative practice that can reduce the amount of fungal spores in the soil.

Maintaining good plant vigor with irrigation and correct fertilization and plant nutrition can also minimize the impact of this disease. Healthy vigorous plants have a better chance of out-growing the impact of the disease. Nutritional balance in the plant can be evaluated using plant tissue analysis. Plant tissue – in Solanacea crops this is the newest, mature trifoliate - can be collected and sent to the NCDA&CS lab in Raleigh for a tissue nutrient test. This test, combined with your soil test results can help you maintain good soil fertility levels for your crop.

The best defense against Fusarium in most crops is selecting varieties with genetic resistance to the disease. Many commercial hybrids have resistance but with the resurgence of heirloom varieties – particularly in tomatoes – varieties are again being grown that are susceptible to Fusarium. Field sanitation and good plant nutrition are the best defense you have if you are growing heirloom varieties.

**Food Safety – Salmonella in Tomatoes**

I am sure by now anyone reading this newsletter has heard about the Salmonella outbreak in tomatoes. It has the potential to be one of the worst economic hits related to food borne illness that any segment of the fruit or vegetable industry has seen to date. As of June 1, 2008 the Center for Disease Control reported 383 people in 30 states, now including North Carolina have been infected. As of June 19, no known source has been identified, which leaves tomato
growers in a precarious position as consumers react to the on-going media coverage.

As producers you are on the proverbial ‘hot seat’ with consumers. Sadly ‘guilt by association’ is likely to affect all of you who grow tomatoes. While it is not fair, it is reality when it comes to food borne illness outbreaks. Consumers react to the 10 second sound bites aired on the national news. If they are not expressing concerns already I am sure they will be asking a lot of questions the longer the source of this outbreak remains unidentified.

As direct marketers and growers you are your own best line of defense against consumer reaction/overreaction. While they have a right to be concerned it is important to have the correct information available to minimize their fears about tomatoes specifically or about the food industry in general.

NC Cooperative Extension has a multitude of informational fliers available to you that can help you tell your customers what is happening with the outbreak, what is being done to identify the source and what they [consumers] can do to ensure the tomatoes they buy are safe to eat. Unfortunately, when problems like this occur, the media coverage is not always accurate, fair or complete. It is your job as part of the tomato and produce industry, and my job with Cooperative Extension, to educate consumers about what is safe.

The good news, as of today CDC reports that North Carolina grown tomatoes have not been implicated in the outbreak. The CDC has indicates that cases have been identified in North Carolina but NC tomatoes have not been identified as the source of these illnesses. This is due in part to the fact that much of the tomato crop in the state was not in production when the outbreak started. This does not exempt you from having a potential problem but it does give you a marketing point with your customers.

The best defense you have against outbreaks like this is to be open and honest with your customers about your production practices, the source of your tomatoes if you are buying and reselling and go out of your way to maintain an open line of communication with your customers. They will appreciate this and feel better about the food they buy and ultimately about tomatoes in general.

Another marketing and management tool you can use or pursue is to have a Good Agricultural Practices (GAP) audit done on your farm. This is a proactive management certification program you can use to highlight the things you do to keep the produce you grow safe. I have talked about getting a third-party GAP audit done on your farm and consumers will appreciate knowing what you are doing to keep the products you grow safe to eat.

If you want to set up an appointment to have a GAP audit done on your farm, I can help you contact the people you need to see to pursue it. GAP certification is not mandatory, but it can be a good way for you to show your customers that you are concerned about food borne illnesses and that you are doing everything you can to provide them a safe product.

I am enclosing in this newsletter a fact sheet titled Good Agricultural Practices for the Production and Handling of Tomatoes, which is also available online at: http://www.ces.ncsu.edu/depts/foodsci/ext/programs/produce/safety/tomato1.pdf.

The information in this brochure can share with consumers to tell them what you are doing to keep the produce you sell safe. It is also a guide to follow to ensure you are using management techniques that will minimize the risk of having a food borne illness problem. Using these and other resources available from universities across the US, you can keep your customers’ confidence in you, your produce and in the produce industry in general, and in tomatoes specifically.

If you have questions about any of the information, upcoming meetings, business strategies, or crop production management issues, please call me at the Jones County Extension Center at (252) 448-9621. I can also be reached by email at: Mark_Seitz@ncsu.edu