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

Upcoming Workshops, Tours & Meetings


August 14, 2007. SE Region Strawberry Pre-Plant Meeting. Pender County Extension Center. Registration 5 PM. Dinner 5:30 PM. Program at 6 PM. Call Mark Seitz in Jones County at (252) 448-9621, or Howard Wallace in Columbus County at (910) 640-6605, for more information.


August 23 – September 5. Mark Seitz Annual Leave. I will be on annual leave from August 23-September 5. Contact Jeff Morton – Onslow County Extension office (910) 455-5873 or Bill Jester – Horticulture Department (252) 526-4445, if you have problems with fruit or vegetable crops.
September 6, 2007. Peanut Field Day. Peanut Belt Research Station. Contact Dr. David Jordan at (919) 515-4068, for more information.

September 6, 2007. Prawn Production and Marketing Information Workshop. Jones County Civic Center. Contact Mike Frinsko or Franky Howard in the Jones County Extension office, (252) 448-9621, for more information.


October 16, 2007. Regional Farmers Market Managers & Board Members Training. Lenoir County Cooperative Extension Center. 1791 Hwy 11/55, Kinston, NC. Contact Mark Seitz at (252) 448-9621, to register or for more information.


December 4-6, 2007. Certified Crop Advisor Training. Onslow County Extension Office. Contact Curtis Fountain at (910) 296-2143, for more information.

December 12-13, 2007. SE Vegetable & Fruit Expo. Myrtle Beach, SC. Contact Cathy Price (910) 334-0099, for more information.

February 18-20, 2008. North American Farmers’ Direct Marketing Association Annual Convention. Kalahari Waterpark Resort & Convention Center, Wisconsin Dells, WI. www.nafdma.com. I am considering taking a group of people to this conference. This would be a 6-7 day trip depending on how much driving a group is willing to do in a given day. If you are interested in going, please contact me.

Business Planning & Management

Meeting Announcements

Be sure to check the Upcoming Workshops, Tours & Meetings section closely this month. There are a lot of excellent Extension programs coming up this fall that you should have on your calendars. We (Extension) hope you will get some good information out of these programs to take home with you and use on your farm.

Performance:

“You have to perform at a consistently higher level than others. That’s the mark of a true professional.”

Joe Paterno
Penn State Football Coach

The Quotable Coach
by Thom Loverro

Creating a Strong Business Strategy

Chess, poker, coaching, investing in the stock market, farming. What do you think of when you see these words or activities? What goes into these games, activities or businesses that make the difference between the winners and the losers? Strategy!

The CEOs, CFOs, presidents and vice presidents of large companies get paid to develop winning strategies for their companies. If their strategy is too risky, the company stands a chance of investing too heavily in a useless product. If they
do not invest they could find themselves left out of the most lucrative business market of their career. While most farms in the produce business do not have CEOs or CFOs or presidents or vice presidents to handle the strategic planning work that large corporations have, you can learn some valuable insight from them by studying how they develop strategies to manage risk.

One strategy farmers use to manage risk is market diversity. Grain farmers use marketing outlets such as the Chicago Board of Trade or the Kansas City Board of Trade to buy and sell commodity futures. Non-agriculture businesses use the NY Stock Exchange or the NASDAQ to buy and sell shares of stock in companies. The strategies they use to balance their purchase and sale of stock of one crop or one product that will help determine their success in the future. The trick for your farm is to convert this strategy into a plan of action.

How do you do this in a produce or agritourism business? While there is no single Top Ten list of things that you can follow to help your farming operation become the next Biltmore Estate, Open Ground Farms or the next Microsoft, there are two things that most businesses attempt to do on a regular basis to maintain their competitive edge in the market.

Communicate. Communicate. Communicate. Communicate your ideas and goals with your staff. Talk to your field workers as well. This is the only way they are going to understand what you want to do. They might not agree with your ideas, but if you fail to communicate with them what you want for your business, you can quickly veer off track. Communicating what you want may also result in additional ideas that you might not have thought of.

Know Your Cost of Production. Do you know how much it costs you to grow peppers, strawberries, grapes or squash per acre? Do you know how much of that expense comes from transportation, from seed or from fertilizer? Do you know, based on these costs, what you can reduce or eliminate from your business to increase your profits? If you do not, you are missing a major piece of management information that can keep you on track and in business.

For most of us there will always be some intrinsic value in doing what you do because you enjoy it. However, at the end of the day you have to pay your bills and eat. Take time to itemize your production costs so you can identify and even fix areas of your business that are leaking money.

If you do nothing else each day as you manage your farm, develop a plan, communicate that plan on a consistent basis with your employees and let them know what is important to you. If you do not, who will?

**Crop Production**

**Alternative Crop Production – Cellulosic Ethanol**

One of the benefits I receive as an Extension agent is the opportunity to travel to conferences to learn about crop production and marketing methods being used in other parts of the country. In July 2007, I attended the National Association of County Agriculture Agents (NACAA) Annual Meeting and Professional Improvement Conference (AM/PIC) in Grand Rapids, Michigan.

The NACAA AM/PIC allows agriculture, horticulture, livestock and aquaculture Extension agents from all over the US, to meet to discuss problems, share experiences and to share ideas about crop and livestock production and marketing. These ideas might be used here in eastern NC.

I wanted to share notes from one of the many sessions I attended on cellulosic ethanol production, that I found very interesting. This is a topic and crop production opportunity that I think all growers will participate in at some level in the near future.

Dr. Bruce Dale, Chemical Engineering Department, Michigan State University, shared some of his research in cellulosic ethanol
production as well as his thoughts on where the ethanol industry is headed. I wanted to share with you my notes from this program, as well as a link to the website with the slides from his talk. The website is:


Cost efficiencies will make it affordable for many reasons:
- oil prices, historically between $15-$20 per barrel, will probably not drop below $50 a barrel ever again, making ethanol cost competitive with gasoline
- give industry the methodology to produce ethanol from cellulose on large scale and they will figure out how to eliminate the inefficiencies in the system and make it cost effective
- the US oil industry recognizes they cannot continue to depend on foreign sources of oil to produce gasoline because they have no control over the source. The US currently receives over 60% of its raw material (crude oil) from foreign sources not necessarily friendly to the US: Iran, Saudi Arabia, Venezuela

Cellulosic ethanol WILL eventually replace corn-based ethanol

Corn-based ethanol is not practical in the long run because other biomass sources have extractable sugars and the sugars in corn are too pure to be used on a relatively “simple” digestion process that can utilize lower grades of sugar to get comparable amounts of ethanol

Corn prices will drop as new biomass sources are found and grown for cellulosic ethanol

Corn growers have to start thinking of themselves as growers of biomass for fuel and feed, not just corn, soybean, wheat growers

100% ethanol based economy for transportation can occur in the US in 10-20 years:
- if we have the political will to build the infrastructure to do it

- And will help rural areas of US and other countries retain economic value – every region can build their own processing facilities and stop buying foreign oil
- Cuts down on the economic dagger that Saudi Arabia, Venezuela and Iran hold over the US and all countries of the world
- Helps meet global demand for oil by reducing the amount of oil consumed for gasoline and allowing it to be used for industrial purposes.
- Renewable resource – we’re directly harvesting solar energy

Finally, it is a myth that ethanol has a net negative energy value. Oil does too. In fact oil’s net energy equivalent (NEE) is almost 20% lower than oil. Ethanol’s net energy equivalent is about -26% while oil’s NEE is about -45%. If you believe we should not use an energy source that has a negative NEE then we should turn off the lights, shut the doors and walk home.

The comments written in italics above are my notes and thoughts from Dr. Dale’s talk. I will offer a disclaimer to them and say I am NOT an expert on cellulosic ethanol production. However, I am learning about it and will do my best to identify opportunities for alternative crop production that might fit farms in this region as this industry develops.

I will also tell you that NC Cooperative Extension will be holding grower meetings in late November in this area (Craven & Duplin Counties?), to give you a more in-depth training on the outlook for ethanol in eastern NC, and the opportunities you as a grower might have to participate in this industry.

## Fall Collard Production

Now is the time to start setting seeds for collards if you are going to raise transplants. Direct seeding is an inexpensive option for many small growers, but for those of you trying to maximize yield and income, growing transplants offers a better chance to have 100% stand.

How do you do this? Horticulture Information Leaflet HIL-12, written by former Horticulture
Science Department Vegetable Specialist, Dr. Doug Sanders, gives a very complete description of how to plant fall collards. Also the North Carolina Commercial Vegetable Recommendations, AG-586, provides excellent production and pest management guidelines. If you would like a copy of either of these publications contact the Jones County Extension office.

As is the case with every crop, fertility, irrigation and sunlight are critical in order to optimize yield. For collards or cabbage, growing transplants is a good way to start to maximize plant populations and yield.

1. **Greenhouse production.** DO NOT GROW seedlings in greenhouses on float beds in August. The temperatures and high humidity of August, combined with the greenhouse canopy, creates an ideal environment for the transmission of the bacterial disease black rot. Black rot is a seed borne disease and transmission of this disease from the seed to transplants to the field can result in contamination of previously clean fields. The bacteria spread and cause most damage in wet, warm weather. It does not usually spread in dry weather and is inactive at temperatures below 50 degrees F. The bacteria can survive in the soil for a year and may be spread in surface water or through irrigation.

2. **Concrete slab transplant production.** This is a good way to grow collard and cabbage for transplanting in September. This open air system minimizes the build up of very humid conditions that would occur inside a greenhouse. Irrigation and shade cloth – at least 50%, are critical for this production method. The shade cloth provides two benefits.

   a. It lets seedlings develop in a relatively sunny environment while minimizing their exposure to direct sun.
   
   b. The shade cloth provides some protection from the intensity of afternoon thunderstorms.
   
   c. It allows you to start transplants in late summer and ensure consistent plant stands in the field in September.

Follow the fertilizer and other production guidelines in HIL – 12 and AG 586 for more detail on how to do this.

**Tomato Diseases & Hot Weather**

I have received many phone calls in recent weeks about tomato production. Everything from questions about tomato spotted wilt virus (TSWV) to blossom end rot to other diseases. Summer in eastern NC is a difficult time to keep tomatoes healthy, and the summer of 2007 is no different.

Here are some brief descriptions of tomato diseases that you might find useful along with links to websites that you might go to for photos and further information. For color photos of what these diseases look like here are a few websites that you can go to:

*Tomato Disorders: A Guide to the Identification of Common Problems, Texas A&M University*

[http://aggie-horticulture.tamu.edu/tomatoproblemsolver/index.html](http://aggie-horticulture.tamu.edu/tomatoproblemsolver/index.html)

*Vegetable MD Online, Cornell University*

[http://vegetablemdonline.ppath.cornell.edu/factsheets/Tomato_List.htm](http://vegetablemdonline.ppath.cornell.edu/factsheets/Tomato_List.htm)

*Tomato Disease Identification Key, University of Florida*

[http://ftsg.ifas.ufl.edu/DISMIK.HTM](http://ftsg.ifas.ufl.edu/DISMIK.HTM)
**Anthracnose**

_Symptoms:_ Anthracnose is a common fruit disorder affecting primarily ripe fruits. Lesions appear first as sunken, circular spots that deepen and become dark in the middle. The lesion often takes on a "bull's eye" appearance due to the concentric ring effect of the enlarging lesion. Water splashed on the fruit during rains or irrigation carry the fungal spores to the fruit.

_Control:_ Crop rotations, fungicide sprays.

**Cottony Leak**

_Caused by:_ Pythium, Phytophthora, Rhizoctonia and Alternaria

_Symptoms:_ Numerous fungi cause fruit rots on tomato. Large areas of the fruit appear water-soaked, with off color darker or lighter patches. Fruit may appear intact until touched. Handling usually punctures skin and internal watery tissue escapes.

_Control:_ Fruit should be kept off the soil (if possible), and surface wetting should be minimized. Furrow or drip irrigation is preferred over sprinkler irrigation. Preventative fungicide sprays may be required if a "zero tolerance" for defects production system is needed.

**Blossom End Rot**

_Caused by:_ Physiological Disorder

_Symptoms:_ Blossom end rot can affect fruit at all stages of development. The characteristic symptom is a progressive deterioration of the blossom end of the fruit, from a water-soaked appearance to a sunken, black, leathery lesion. While secondary fungal infections may occur, blossom end rot is a physiological disorder caused by calcium deficiency induced by water stress.

_Control:_ Careful water management practices are a key. Irrigation and/or mulching are important. Application of lime or calcium prior to planting may help. Liquid fertilization using calcium nitrate can be used for small plots.¹

¹ **Disorders of Ripe Tomato Fruits.** Texas A & M University. [http://aggie-horticulture.tamu.edu/tomatoproblemsolver/ripefruit/index.html](http://aggie-horticulture.tamu.edu/tomatoproblemsolver/ripefruit/index.html)

If you have questions about any of the 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.

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