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

Mark Seitz
Area Specialized Agent – Commercial Horticulture
(252) 448-9621 or Mark_Seitz@ncsu.edu

Upcoming Workshops, Tours & Meetings

January 8 and January 15, 2008. NC Cooperative Extension Hospitality Training. Onslow County Extension Center, Jacksonville, NC. Contact Mark Seitz or Ivy Reid at the Jones County Extension Center for more information. This program consists of two, half day sessions – with homework! – to teach you or your employees the value of being hospitable to people and how it can improve your business.


January 15, 2008. NC Blueberry Council’s 42nd Annual Open House and Trade Show. Clinton, NC. The meeting is sponsored by the NCBC in cooperation with North Carolina State University, and will be held at the Sampson Agri-Expo Center in Clinton, NC. For details, contact Julie Woodcock (910) 471-3193 or Bill Cline (910) 675-2314.

January 17, 2008. NC Muscadine Grape Association Winter Meeting. The meeting will be held at the Brownstone Hotel in Raleigh, NC from 8:00 AM -5:00 PM and is worth 2.0 pesticide credit hours. Contact Jessica Swencki at jessica.ncmga@yahoo.com for more information.

January 29, 2008. Putting Small Acreage to Work. Brunswick County Extension Center, Bolivia, NC. Contact Martha Warner at (919) 253-2610 to register or for more information.

January 30, 2008. Private Pesticide Applicator Recertification Training. Jones County Civic Center, Trenton, NC. 1 PM – 5 PM. 2.0 hours X (specialty) training will be held from 1 PM to 3 PM and 2.0 hours of V (safety) credits will be offered from 3:15 PM – 5:15 PM. Contact Mark Seitz to register or for more information.

February 1, 2008. 5th Annual Agritourism Conference. Duplin County Extension Center. Contact Lin Nichols at the Duplin County Extension Center at (910) 296-2143 to register and for more information.

February 6-8, 2008. 25th Mid-Atlantic Direct Marketing Conference and Trade Show. Sheraton Inn, Dover, DE. This is an excellent conference for anyone currently in or considering a roadside or direct marketing business. I attended this in 2007 – excellent farm tours, speakers, conference. Early registration ends January 15, 2008. Contact Carl German at clgerman@udel.edu or by phone at (302) 831-1317 for more information or go to their website at: www.madmc.com.

**February 26, 2008.** Hold this date! **Regional Farmers Market Managers Meeting.** Location & time to be determined.

---

**General Information**

**Did You Know…** In 1907, James A. Butler became the state’s first county agent. Based in Statesville, Butler and C.R. Hudson worked in Iredell and seven other western North Carolina counties in 1907 and 1908 -- Catawba, Lincoln, Gaston, Mecklenburg, Union, Cabarrus, and Rowan.

---

**Pesticide Applicator Recertification Training Opportunities**

If you are in need of NCDA&CS Private Pesticide Applicator Recertification credit hours – safety training (V credits) – a two hour training program will be hosted by NC Cooperative Extension on January 30, 2008, at 3:15 PM, at the Jones County Civic Center. The training will be facilitated by Mark Seitz and Mike Carroll, Craven County Agriculture Agent. In addition, two hours of specialty credits (X credits) will be offered. A general fruit and vegetable crop pesticide applicator training program for anyone needing X credits will be held at the same time.

---

**Program Evaluation & Needs Assessment**

Happy New Year! It’s hard to believe 2008 is here and we are off and running. With the start of the New Year, I need feedback from you regarding this newsletter and my Extension programs. This information helps me identify and address your needs, as well as track and document the needs of others involved in the fruit and vegetable and alternative crops industry.

To make this evaluation I have attached a copy of two survey forms that I would ask that you fill out and return to me. This information is important for me to deliver programs that fit your needs! Please take a minute to fill out these surveys, and please be honest in your evaluation about what you need, what you think can be done better, and if you need assistance with a specific crop. Please return them to me by January 10, 2008, at the Jones County Extension office at: P.O. Box 218, Trenton, NC. This information will go a long way in helping me provide you with the best, research-based information you need.

Also, if you have any questions, suggestions for field research, programs or other comments about programs you would like me and my colleagues at Cooperative Extension to offer please let me know. We are doing our best to answer your questions and meet your needs but without your feedback that task is a little more challenging.

---

**Business Planning & Management:**

**Planning**

"Failing to plan is planning to fail”.

Numerous authors… numerous variations

Planning takes time, energy and patience, which at times is a struggle for all of us to do. I have written about business planning in this section of the newsletter a number of times in one fashion or another. Along with business planning comes personal financial planning as well. Just as in business, no planning method is perfect, but as the saying goes, ‘failing to plan is planning to fail’.

No single planning method will give you all the answers you need, and no method will keep the world economy from changing your plan. However, developing a business plan and personal financial plan, gives you the best chance to manage the changes that come your way.

NC Cooperative Extension and Extension around the US is working to help business owners, farmers and individuals plan for their financial future. Through the eXtension initiative – an online platform created for the dissemination of information electronically from all states, counties, municipalities to share – Cooperative Extension has an excellent website with numerous financial planning tools to do your own financial plan. Take the time this winter to use some of these tools to create a new business plan or revise an old one.
In addition NC Cooperative Extension Family and Consumer Science agents in each county can help you find additional financial planning resources that may mean the difference between running a business that pays the bills and generates enough revenue for you to save for retirement versus one that drives you into bankruptcy.

The website is:

Extension Personal Finance
http://www.extension.org/personal+finance

Good luck!

Crop Production

Drought Management

Everyone knows drought conditions continue to affect North Carolina and the entire southeast US. Some areas in eastern NC were fortunate enough to receive a stray shower this year, but the volume of water received across the region has not been sufficient to expect good fruit or vegetable production conditions going into 2008 without irrigation. Table 1 shows some rainfall data from the area for 2007, and how it affects you.

In light of this drought the NC Horticulture Science Department updated and published an excellent publication available online titled: Offseting Drought for Small Scale Vegetable Production in North Carolina. This publication can be found online at: http://www.ces.ncsu.edu/disaster/drought/smallscale_vegetable.pdf.

Offsetting Drought for Small Scale Vegetable Production in North Carolina covers a range of topics including choosing irrigation equipment, irrigation system requirements, water quantity and quality, irrigation scheduling, diversification and mulches. It helps answer questions about the drought and its impact on fruit and vegetable farms.

In addition to this publication there is a newly published book by USDA titled Managing Cover Crops Profitably, Third Edition which is available from the USDA Sustainable Agriculture Research (SARE) program. This publication can be downloaded at:

http://www.sare.org/publications/covercrops/covercrops.pdf

or you can purchase a hard copy from the Sustainable Agriculture Network for $19.00 plus $5.95 s/h by calling (301) 374-9696 or emailing sanpubs@sare.org, or order online at: www.sare.org.

Table 1: 2007 Eastern NC Precipitation Data

<table>
<thead>
<tr>
<th></th>
<th>New Bern, NC</th>
<th>Richlands, NC</th>
<th>Cunningham Research Station, Kinston, NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Year Historical</td>
<td>54.60</td>
<td>54.00</td>
<td>49.50</td>
</tr>
<tr>
<td>Average Annual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precipitation (in.)</td>
<td>54.60</td>
<td>54.00</td>
<td>49.50</td>
</tr>
<tr>
<td>Total Precipitation</td>
<td>33.65</td>
<td>35.58</td>
<td>29.92</td>
</tr>
<tr>
<td>(in.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days w/ Measurable</td>
<td>91</td>
<td>75</td>
<td>82</td>
</tr>
<tr>
<td>Precipitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average # Days</td>
<td>4.0</td>
<td>4.9</td>
<td>4.5</td>
</tr>
<tr>
<td>Between Rain Events</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max # Consecutive</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Days w/Rain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max # Days</td>
<td>19</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Between Rain Events</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Largest Rain Event</td>
<td>3.33</td>
<td>3.30</td>
<td>3.13</td>
</tr>
<tr>
<td>Average Rain Event</td>
<td>0.37</td>
<td>0.47</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Source: STATE CLIMATE OFFICE OF NORTH CAROLINA

http://www.nc-climate.ncsu.edu

These resources offer you research-based information that can help you make better management decisions if the drought continues.

Protecting Honey Bees from Pesticide Applications

Honey bees are a critical and often forgotten aspect of vegetable production. They are the pollination workhorses of Nature and without the pollinating work they do much of our food supply would not exist. When averaged over the last five years honey bees are estimated to be responsible for the pollination of $88 million in fruit and vegetable production (67%) and $154 million (24.5%) of total crop production. That’s a lot of cucumbers and strawberries!

Not all crops need honeybee activity to pollinate. Crops such as cotton, peanuts, soybeans, grapes and strawberries need very little honeybee activity to properly pollinate. A study by Morse (2000) estimated that crops like cotton (10 percent) and peanuts (20 percent) showed little difference in
yield, and yet honeybee activity in these crops only accounted for 50 percent and 20 percent respectively of the pollinating insects that visited these crops.¹

While honeybee activity is critical for the success of many fruit and vegetable crops you as a grower must balance the need for pollination with the need to protect the crop from insect and disease damage and do so without causing damage to the hives you are managing or hiring a beekeeper to bring to your farm.

If you are a beekeeper or are considering hiring a beekeeper in 2008 to manage hives on your farm, there are a few simple rules to follow to get your crop pollinated, keep your crop protected from the insects and diseases, and keep the bees safe.

The following information is taken from the Apiculture Program, Department of Entomology, North Carolina State University: Beekeeping Note 2.12. The full text from this article can be found online at: http://www.cals.ncsu.edu/entomology/apiculture/PDF%20files/2.12.pdf

**PRECAUTIONS FOR THE PESTICIDE APPLICATOR**

1. Always read and follow any warning statements regarding honey bees on the pesticide label.

2. If more than one product is available to control a pest, avoid using a pesticide listed in Group 1 (see below) in favor of one in Group 2 or 3.

3. Avoid applying any bee toxic pesticides on blooming plants (host crop and weeds) that attract bees and pesticide drift to nearby blooming weeds that are attracting bees.

4. Time of day of the pesticide application is very important. Pesticides that are toxic to bees should be applied in the late afternoon (after 3:00 pm) or in the evening if at all possible. Most honey bees have stopped foraging and have returned to their hives by 3:00 pm. This precaution will allow maximum time for the pesticide to break down before the bees come into contact with it the next day.

5. Select the safest formulation of the pesticide that is available for the intended use. “Drifting” of the pesticide from the target pest and/or crop to areas frequented by bees, should be minimized and formulation selection is the key to this problem.

   a. “Dusts” almost always present the most drift problem of any pesticide formulation and are generally more dangerous to bees than are sprays or granular applications.

   b. Spray formulations are usually safer to bees than are dusts, but there are differences among the spray formulation types. Generally, water soluble formulations are safer than are emulsifiable formulations, and fine sprays are less dangerous than are course sprays. Sprays of undiluted technical pesticide (ULV) may be more dangerous than diluted sprays.

   c. Granular applications are generally the safest formulations from a drifting standpoint and the accidental killing of bees. This use should be considered, if a granular formulation is suitable, for controlling the target pest.

   d. Microencapsulated pesticides such as Penncap-M® present a very distinct and serious threat to honey bees. The particle size of this pesticide formulation is very similar to that of pollen and adult honey bees may carry this pesticide back to the hive where it will be combined with pollen that is being stored in the hive. This pesticide will not kill the adult bees that collected it, but the microencapsulated pesticide will kill the brood (immature) stages of the bees when it is later fed to those bees. Bees have little protection against this product. (See also item #10 in this list of precautions).

6. The mode of pesticide application is also important, particularly from a drifting standpoint. Aerial applications are generally more dangerous than applications by ground equipment because of the amount of pesticide that may drift from the target pest and or crop to nearby foraging bees or beehives. Air-blast sprayers are more dangerous than pressurized pump sprayers. Do not apply pesticides when wind velocities exceed 8 miles per hour; this will lessen pesticide drift and bee kills. IF a pesticide application is being made by air, then it is the contractor’s responsibility to notify any beekeepers that have “registered” apiaries.
(one or more hives of bees) within 2 miles of the area to be aerially sprayed. These regulations are defined in the N.C. Pesticide Laws and the person responsible for the notification is the person who contracts for the aerial application.

7. Never apply any pesticide directly over a beehive.

8. Notify beekeepers who have beehives near an area to be treated with a pesticide so that they may attempt to protect their bees against any inadvertent pesticide kills.

9. Follow proper precautions in disposing of unused pesticides and pesticide containers. Be particularly careful not to contaminate water with pesticides as the water may be collected by bees and result in bee kills.

Following these precautions will not only improve your crop quality, but will also protect those out of sight, out of mind workers that provide you with so much ‘free labor’.

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

North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.