June 2011

EDUCATIONAL MEETINGS AND EVENTS

Pamlico-Craven Farm Tour will begin at 8:30 am on July 27, 2011. This tour will examine local on-farm tests led by NCSU and industry within Pamlico and Craven Counties. The tour will conclude with a lunch at the Craven County Economic Development Commission Building. More details to follow in the July newsletter.

2011 North Carolina Flue-Cured & Burley Tobacco Tour will be held from July 18-20, 2011. This tour is the combined effort of the Departments of Plant Pathology, Crop Science, Entomology, and Biological & Agricultural Engineering. The tour provides an opportunity to observe some of the tobacco research conducted by the North Carolina Cooperative Extension Service and the North Carolina Agricultural Research Service. Registration and details will be provided at the web site, http://www.cals.ncsu.edu/plantpath/extension/commodities/tobacco/tobacco-tour.html

Weed Management in Organic Soybeans: Multiple Tactics for Success will be offered in Kinston at the Lenoir Extension office on July 21, 2011. This class will offer 1.5 hours of pesticide credits for categories N, O, D and X. To register or more information, contact Molly Hamilton at (828) 273-1041 or email molly_hamilton@ncsu.edu.

Summer 4-H Programs: Craven County 4-H is gearing up for a full summer of “hands-on” learning! Programs begin on June 21st and run through August 19th. Programs include scrapbooking, kayaking, science experiments, sewing, bees and much more! You do not have to be a member of 4-H to participate. The program is open to all youth ages 5-18. Registration cost depends on the workshop or program. For complete information, download registration forms from our home website, contact Wendy Paschal at wendy_paschal@ncsu.edu or call her at (252) 633-1477. Registration is on a first-come, first-served basis!

For a listing of other potential pesticide certification classes, visit the NCDA & CS web page, http://www.ncagr.gov/SPCAP/pesticides/index.htm. For information for other Cooperative Extension events, visit our web page at http://craven.ces.ncsu.edu/.

CROP OUTLOOK, MANAGEMENT AND DROUGHT

Most have received very little rainfall, if any, since the last week in April so plants are severely stressed. In contrast, scattered areas received several 0.5-1” rainfall events. Crops in these areas are somewhat stressed but much advanced.
Thus, offering any practical advice that fits all growers in this newsletter is not possible. Rather, it will be assumed that most are experiencing severe drought conditions. Below are some thoughts and suggestions.

**CORN** – Prior to the reproductive stage, drought conditions can reduce corn yields by 30%. Thus, if we assume an average yield of 100 bu/ac, we are reduced to 70 bu/ac due to drought conditions during early growth. This also assumes that we receive rainfall at or near tassel. If we do not, yield can be reduced as much as 50%. If no rain occurs by the silk stage, as much as 100% of yield can be reduced. Thus, the lack of rainfall and excessive heat is likely to result in very low yields. As such, it begs the question as to whether we should accept payment of insurance or disk the field and replant to soybeans. The answer will vary by grower, type of insurance, enrollment into FSA farm programs, and herbicide choices. A few considerations are outlined below.

- You and your insurance company must agree that the crop is a failure or to the amount of yield lost. If no yield determination is reached, you may need to leave strips of the corn for later evaluation.
- **Prior to destruction of the crop**, you MUST report the crop as a failed crop to the FSA office. No exceptions.
- You have a choice to ensure 100% of the corn crop and pay 100% of the premium of the corn BUT you cannot ensure the subsequent soybean crop. As an option, you can insure the soybean crop (usually at 65%) but must reduce the insurance payment and premium on corn (usually 35%).
- Decisions must consider which FSA programs you enrolled and how these potential payments (or lack of), may affect your potential profit.
- Planting soybean into failed corn fields assumes we receive rainfall in time to meet the June 30th planting deadline AND the remainder of the year provides favorably weather for soybean production.

Many producers have inquired of disaster payment or ad hoc funds to assist producers. Based upon comments from previous trainings and the general trend in governmental farm programs, these types of payments are not likely to occur. Rather, the SURE program replaces these payments. Whether you get a payment or not depends upon a set of “trigger” events as well as how well you provided for yourself through the purchase of crop insurance (Greater crop insurance purchased usually relates to greater potential SURE payments). Additionally, many of these programs no longer consider any particular disaster event. Rather they examine total revenue. Thus, a loss in corn production may or may not be substantial event when considering total annual income for all crops in 2011.

**Weed Control in Corn** – In a normal year, pigweed and horseweed can make seeds from the time of harvest until first frost. Consequently, we are “breeding” additional problems of herbicide resistant weeds for the following crop if we do not control these weeds post-harvest. It has been suggested to scout fields shortly after harvest. Problem areas of weeds should be disked or an application of an inexpensive broadleaf herbicide (other than glyphosate) made to kill any pigweed or horseweed. Otherwise, this adds more resistant weed seeds to the soil. This may be especially true this year given the poor growth of corn but continued growth of weeds. It is logical to assume that cultivation would be a cheap alternative. If you choose this route, make sure you have an insurance adjustor examine the crop and report the failed crop to the FSA office prior to any disking.

**COTTON** – As you prepare to make further weed control applications, remember that the addition of surfactants, AMS, insecticides and multiple herbicides may amplify crop injury during this hot, dry period. This is also true when applying Ignite to Widestripe cotton. While not illegal, neither Dow nor Bayer supports this application to Widestripe cotton since some stunting/burn will result under normal conditions. Separate trips or a direct application may be warranted.

If we receive adequate rainfall, plants will respond with rapid growth. As such, plant growth regulators will need to be applied. The benefit of these products is early maturity of cotton. In order to reap this benefit, application must be made at an early stage of cotton growth (usually about 2 weeks prior to bloom). A sequential treatment about 2 weeks later is also necessary. Delays in treatment or rates too low will result in less benefit of the application and additional applications later in the year. (Consider this: What point is there in the August application of a product that is intended to promote early maturing cotton? We generally are approaching the end of the blooming
period about this time. Reducing plant height is best achieved by encouraging early boll retention through good management and lower nitrogen rates. This tactic is also much cheaper.) Conversely, if we receive only small amounts of scattered showers, we may not benefit from plant growth regulator applications.

On a last note, spider mites and other pests that we would ordinarily consider secondary pest may warrant scouting. Cotton has the remarkable ability due to its deep rooting system to continue growing even under these extreme drought conditions. As such, they often appear as the “best meal in town” from an insect’s point of view. Be diligent in checking for insects.

To monitor weekly cotton pest reports and progress, utilize the following resources:

- Cotton Pest Patrol: Toll-free hotline for updates on insect problems from around the Cotton Belt is available at 877-285-8525. Just select the state update you would like to hear. For North Carolina, select 3 for the Southeast and select 3 again to a message from Dr. Jack Bacherel.
- North Carolina State University Teletip Updates: Call 1-800-662-7301, and press 2 for cotton.

**SOYBEANS** – Soybeans planted earlier appear to have emerged well. Later plantings are highly variable. In many areas of the county, planting has ceased due to extremely low soil moisture. Hopefully we will receive rainfall soon. If so, remember that the FSA deadline for planting soybeans is June 30th.

**Weed Management in Soybeans** – Three points need to be targeted to control herbicide resistant pigweed and horseweed: 1) Utilization of pre-emergence materials; 2) Timing of application; and, 3) Correct spray volume and nozzle selection. First, either as a burn-down application or as an at-planting application, a pre-emergence material needs to be included. (Granted, control this year was fair, at best, given our extremely dry soil conditions). Just as in cotton production, any post-emergence applications should include a product with some pre-emergence activity (See list at end of newsletter). Simply put, to avoid or delay further herbicide resistance, our management must include prevention of pigweed and horseweed emergence. Secondly, the timing of the application must be made before weeds get beyond the 3-4” range.

Glyphosate will NOT control these weeds so other products we select must work. This has several key implications. Pigweed may grow 1-2” per day. We cannot wait simply because it is hot and dry. In some cases, this may result in more than one application. And lastly, lower spray volumes and air induction nozzles are fine when glyphosate is applied alone. However, many of the preferred products used as tank mixes are contact herbicides. Best results are obtained when using flat-fan nozzles and a spray volume of 15 gallons per acre or more.

**Insect Management in Soybeans** – Typically, we don’t worry much about early season soybean insects. However, with the drought stress, we do not need to add additional stress from insects. Two pests are worth watching. The first is the bean leaf beetle. Under low beetle populations and normal soybean growth, we do not typically treat because plant growth normally is greater that the rate of feeding of this insect. However, if the population of beetles is high or soybean growth slow, severe defoliation may result. If defoliation is above 30%, insecticide treatment of seedlings may be warranted.

The other potential pest is the grasshopper. These pests are common but under normal conditions remain in ditch banks, wooded areas, or other natural vegetation. Under hot, dry conditions, they tend to migrate in large numbers to young, succulent plants. Thus, if the current weather continues, as corn becomes less attractive, wheat is harvested, ditch banks cleaned or roadsides mowed, watch for migration into nearby fields. Entire fields may not be affected but edges can be defoliated quickly.

**Potentially New Soybean Pest** – The invasive bean plataspid dubbed the “kudzu bug” by University of Georgia researchers, has now been sighted on kudzu in North Carolina. This insect is a native to Asia and feeds on legumes. As such, it may become a major insect pest for soybeans. It is a piercing sucking pest, like the stinkbug, but it feeds on the stems and leaves of the plant, rather than the pods. This pest is a strong flier and seems to be spreading rapidly. A preliminary threshold from Georgia data is 3 to 5 bugs per plant (one bug per sweep) in mid- to late August. A single pyrethroid insecticide application should be effective to control this pest but because it is a strong flier, it may re-infest treated areas. In a series of nine replicated tests conducted on soybean in Georgia in 2010, this pest accounted for an average yield loss of almost 20%

For more information on soybean pest identification, thresholds or treatment options, refer to the web page, http://www.ces.ncsu.edu/plymouth/pubs/ent/index3.html

**TOBACCO** – More than any other crop, tobacco is difficult to discuss due to the extreme differences in stage of growth. In the best case, tobacco is approximately waist high and at early button stage. Contact will/should be applied soon. In the worst case, plants are barely a foot tall and have bottom leaves decaying due to extremely low soil moisture/ fertilizer applications (Not necessarily excessive fertilization, nonetheless detrimental to plant due to high salt levels and low soil moisture). As such, we will continue to discuss and review management decisions with growers on a case-by-case basis. Simply contact our office at 633-1477 for assistance (or email me).

Tobacco Barn Heat Exchangers – If you wish to have heat exchangers checked, please make an appointment in advance by contacting me (email preferred since it may be difficult to catch me in the office). Please do so prior the beginning of harvest. As growers begin harvest it is simply too difficult to arrange schedules between harvest, weather, other growers, and the equipment (shared among three counties).

Tobacco Economic Survey – Every tobacco grower within the state was sent a survey from the NCSU Agricultural & Resources Economic Department regarding cost of tobacco production. If you have not already completed this survey, please take the time to do so. Thank you in advance for your assistance.

NCSU Tobacco Connections Newsletter - Periodically, NCSU Extension Specialist, and often retired personnel, collaborate to release a newsletter regarding pertinent production topics or industry news. The past newsletter was entirely devoted to sucker control and the potential use of conveyer sucker control units. If you wish to receive this newsletter (entirely distributed via email since it often contains charts, data and images), please email me a request to be added to the list (mike_carroll@ncsu.edu).

**PEANUTS** - While it may be tempting to apply gypsum to peanuts a bit early to avoid an overwhelming number of tasks that may need to be performed when rainfall returns, do not. To be effective, gypsum needs to remain on the soil surface near the pegging site on the soil. Rainfall may wash gypsum off the row if applied now. If possible, delay gypsum applications until plants are large enough to provide some canopy during rainfall that will prevent the movement of gypsum.

Potential New Peanut Pest - Rather than repeating, simply read the comments regarding the kudzu bug under the soybean discussion. This pest may be found in peanuts. No research data is currently available regarding control in peanuts. We will pass along any information as we receive it.

Weed Resistance Management – As with other crops, failure to control herbicide resistant pigweed and horseweed can be costly. The options for peanuts are somewhat easier but there continues to be much concern of continued use of herbicides with the same mode of action. Choices of products are numerous and often depend upon product previously applied. NC Cooperative Extension has prepared a guide, Managing Herbicide-Resistant Weeds in Peanuts in the United States. This six page guide can be downloaded from http://www.peanuts.ncsu.edu/Production/Default.aspx#MG005015

**DISEASE FORECAST RESOURCES**

Soybean Rust – Soybean rust continues to be monitored through scouting reports and sentinel crops planted throughout the US. To date, rust is confirmed in Florida. Therefore, we should watch weather systems that move from the South carefully since these storms can transport rust into our area. Confirmed areas of soybean rust, projected spore deposition and weather information can be found at http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi.

Tobacco Blue Mold – There are no known reports of blue mold within the US. To monitor this disease, visit http://www.ces.ncsu.edu/depts/pp/bluemold/.

Peanut Leaf Spot and Spray Advisory – NCSU coordinates with many agencies to provide detailed information regarding potential disease incidence, timing of treatment and product recommendations.
Based upon grower planting dates, location and most recent fungicide applications. This ensures maximum protection with the least number of treatments possible. Daily emails are available. To enroll or find information on diseases, other pest, and production practices, visit the website, http://www.peanuts.ncsu.edu/.

**FINANCIAL SUPPORT AND OPERATIONS**

As with most state agencies, we are beginning to examine how reduced funding will alter normal operation. It also provides discussion with administration and our stakeholders to evaluate priority issues or concerns. As such, if you are contacted, we urge you to provide your honest assessment, thoughts, and concerns. Like many agencies, we hope for the return of better economic circumstances in the coming years but must also be prepared to operate if further financial reductions occur.

For now, we will continue to serve with full state and county support. You should also be aware that many of the state commodity associations are contributing funds to assist agents and growers. Funds for payment of agronomic services (problem samples) through the NCDA & CS as well as limited mileage reimbursement to agents is available. If you are a member of these associations, then please accept my gratitude for the financial support. If not, I encourage you to become more active in these associations. They not only provide a unified voice on issues for each commodity, they also provide educational activities, outline priority issues for research and offer individuals the chance to learn better management. Examine the links below to discover some of the events and efforts of these commodity groups.

Corn Growers Association of North Carolina - http://www.ces.ncsu.edu/plymouth/cropsci/cornsite/

NC Cotton Producers Association – http://www.nccccotton.org/

NC Peanut Growers Association - http://www.aboutpeanuts.com/

NC Small Grain Growers Association - http://www.ncwheat.com/

NC Soybean Producers Association – http://www.ncsoy.org


NC Vegetable Growers Association - http://www.ncvga.com/

**CRAVEN COUNTY EXTENSION EMAIL LIST**

We periodically email notes from NCSU Specialists, events, newsletters, disease updates or other information to your email account. We do not share your email address or information. (Items sent are selective. Most are meeting announcements, notes form NCSU, or newsletters). Regrettably, individuals change companies or email addresses without contacting us. Thus, we need to update our records. If you have changed your email OR if you would like to be added to the list, please send an email directly to me (mike_carroll@ncsu.edu) with the message, “Enroll in email group”. Thank you.

If we can be of any assistance, please contact our office at 633-1477

Mike Carroll
Extension Agent
Agriculture
mike_carroll@ncsu.edu

**Accommodations for individuals with disabilities or special needs:** Individuals with disabilities or special needs desiring accommodations to participate in these activities should contact Tom Glasgow at 633-1477 at least two weeks prior the event. NC Cooperative Extension takes seriously its obligation to accommodate the known disabilities of its faculty, staff and guests.
## Programs for Glyphosate-Resistant Palmer Amaranth Control in Roundup Ready Soybeans

### Conventionally Tilled Soybeans

<table>
<thead>
<tr>
<th>Option</th>
<th>Preplant Incorporated</th>
<th>Preemergence</th>
<th>Postemergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>Prowl or Treflan</td>
<td>Authority MTZ$^{1,2}$, Authority XL or Sonic Boundary$^{1,2}$, Canopy$^{1,2}$, Envive$^{3}$, Gangster$^{3}$, Prefix$^{4}$, Valor SX$^{3}$, Valor XLT$^{3}$</td>
<td>No Palmer emerged: Glyphosate + Dual Magnum or Warrant Palmer 4 inches or less: Extreme$^{5}$ Flexstar + glyphosate Flexstar GT 3.5 Harmony SG$^{5,6}$ + glyphosate Prefix + glyphosate Pursuit$^{5}$ + glyphosate</td>
</tr>
<tr>
<td>Option 2</td>
<td>No Preplant Herbicide</td>
<td>Authority MTZ$^{1,2}$ + Dual Magnum, Intro, or Prowl Authority XL or Sonic Boundary$^{1,2}$, Canopy$^{1,2}$ + Dual Magnum, Intro, or Prowl Envive$^{3}$, Gangster$^{3}$, Valor SX$^{3}$, or Valor XLT$^{3}$ + Prowl Prefix$^{4}$</td>
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### Full-Season No-Till Soybeans

<table>
<thead>
<tr>
<th>Option</th>
<th>Early Burndown</th>
<th>Preemergence</th>
<th>Postemergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>With residual: Glyphosate + 2,4-D$^{7}$, Envive, Gangster, Valor SX, or Valor XLT Gramoxone + 2,4-D$^{7}$, Envive, Gangster, Valor SX, or Valor XLT</td>
<td>Gramoxone + one of the following: Boundary$^{1,2}$, Canopy$^{3}$, Dual Magnum Intro, No residual herbicide$^{8}$</td>
<td>No Palmer emerged: Glyphosate + Dual Magnum or Warrant Palmer 4 inches or less: Extreme$^{5}$ Flexstar + glyphosate Flexstar GT 3.5 Harmony SG$^{5,6}$ + glyphosate Prefix + glyphosate Pursuit$^{5}$ + glyphosate</td>
</tr>
<tr>
<td>Option 2</td>
<td>Without residual: Glyphosate + 2,4-D$^{7}$, Gramoxone + 2,4-D$^{7}$</td>
<td>Gramoxone + one of the following: Authority MTZ$^{1,2}$ + Dual Magnum, Intro, or Prowl Authority XL or Sonic + Dual Magnum, Intro, or Prowl Boundary$^{1,2}$, Canopy$^{1,2}$ + Dual Magnum, Intro, or Prowl Envive$^{3}$, Gangster$^{3}$, Valor SX$^{3}$, or Valor XLT$^{3}$ + Prowl Prefix$^{4}$</td>
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### Double-Crop No-Till Soybeans

<table>
<thead>
<tr>
<th>Early Burndown</th>
<th>Preemergence</th>
<th>Postemergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gramoxone + one of the following: Authority MTZ$^{1,2}$ + Dual Magnum, Intro, or Prowl Authority XL or Sonic + Dual Magnum, Intro, or Prowl Boundary$^{1,2}$, Canopy$^{1,2}$ + Dual Magnum, Intro, or Prowl Envive$^{3}$, Gangster$^{3}$, Valor SX$^{3}$, or Valor XLT$^{3}$ + Prowl Prefix$^{4}$</td>
<td>No Palmer emerged: Glyphosate + Dual Magnum or Warrant Palmer 4 inches or less: Extreme$^{5}$ Flexstar + glyphosate Harmony SG$^{5,6}$ + glyphosate Prefix + glyphosate Pursuit$^{5}$ + glyphosate</td>
<td></td>
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1 Product contains metribuzin. Check with seed supplier to determine if your variety is metribuzin-sensitive.

2 Adjust rate for soil texture and organic matter. See label for rates.

3 Envive, Gangster, Valor SX, and Valor XLT labels caution against mixing Dual Magnum (s-metholachlor), Intro (alachlor), or Outlook (dimethenamid) with Envive, Ganster, Valor SX, or Valor XLT due to potential soybean injury.

4 Labels allow only one application per year of fomesafen (an active in Flexstar, Flexstar GT, Prefix, and Reflex). Do not use Prefix preemergence if plans include Flexstar, Flexstar GT, Prefix, or Reflex postemergence.

5 Product contains an ALS inhibitor. ALS-resistant Palmer amaranth is common in NC. Use suggested only when there is a reasonable assurance that an ALS-resistant biotype is not present.

6 Rate varies between STS and non-STS varieties; see label. Expect injury on non-STS varieties.

7 Labels specify a waiting interval before planting of 15 days for 1 pt of 2,4-D amine or 7 days for 1 pt of 2,4-D ester. Higher rates of 2,4-D require a 30-day waiting interval between application and planting.

8 Suggested only for fields with lighter infestations and only where a residual was included in the preplant burndown.