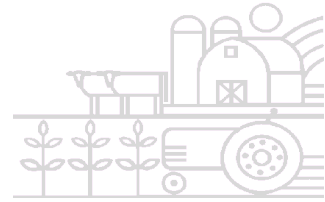


# AGRICULTURAL UPDATE



May 2006

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## SOYBEAN VARIETY SELECTION

Below are the top eight varieties (more listed when there were multiple ties) based upon performance across all locations in 2005 Official Variety Trials. (Round-up varieties only). If you are planting one of these varieties, great! If not, consider these or some of the other top yielders listed at the web site: <http://www.ovt.ncsu.edu/ovt.asp?fmtinfo=1,400,133> (Can also be found through links on our home page <http://craven.ces.ncsu.edu/>) Yields are only part of the selection process. Specific varietal characteristics can be found at the web site <http://www.soybean.ncsu.edu/> and selecting SOYVAR. An asterisk (\*) indicates that this yield, although numerically different, is not statistically different.

### GROUP IV – Non-Stressed Soybean

VARIETY	YIELD
Progeny 4401	53**
Progeny 4804	52*
Terral TV48R43	51*
USG7484nRR	50*
SSRT4651N	50*
Pioneer 94B7	50*
Deltapine DP4331RR	49
USG7494nRR	49

### GROUP V- Non-Stressed Soybean

USG 620nRR	54**
Asgrow AG6702	54**
Vigoro V67N6RR	53*
+Hornbeck S010 816R	52*
Soth. States SSRT6202N	52*
Vigoro V622NRR	52*
+Deltapine DPX6568RR	51*
USG7635nRR	51*
Pioneer 96M60	51*

### GROUP VI – Non-Stressed Soybean

VARIETY	YIELD
USG 620nRR	50
Vigoro V622NRR	48
South. States SSRT6202	48
Dekalb DKB64-51	45
South. States SSRT6630	44
USG 7662nRR	44
Garst 6612RR/N	43
Deltapine DP6880RR	42

### GROUP VII-VIII – Non-Stressed Soybean

DynaGro 34J71	52**
USG 7732nRR	50*
Asgrow AG7601	50*
+C00-73303R	49*
Deltapine DP7870R	48*
Deltapine DP7220RR	47*
Pioneer 97B52	46*
AGS 751RR	45

NOTE: Some soybean varieties may be in very short supply. Plan on having your selection delivered to your farm early and/or have a good alternative in place.

## SPRING CLEAN UP

“Craven County Spring Clean Up” is scheduled for May 6<sup>th</sup>. Volunteers will meet at Lawson Creek Park and depart to designated areas for trash pick up. Gloves and trash bags will be provided. Interested parties should contact Tom Glasgow or Tammy Boyd at our office at 633-1477.

If you know of an area that you feel warrants attention/cleaning or have a volunteer group that would like to participate, call Tom or Tammy.

## SOYBEAN RUST UPDATE

Active sites of soybean rust have been confirmed in 11 counties in Florida, 4 counties in Georgia, 5 counties in Alabama and 1 county in Texas. Additional rust sites are suspected in Mexico. As expected, the warmer winter and additional time needed for the spores to increase in number will probably translate into higher soybean rust incidence this year. Maps of current confirmed sites as well as predicted

risks are located at the web site <http://www.ces.ncsu.edu/depts/pp/soybeanrust/>. (While you are there, visit the blue mold forecast tool!)

Even though we are likely to encounter a greater number of sites, keep in mind that this is a manageable situation. Currently, the closest site is 445 miles from Raleigh. Thus, we have time to plan. And this is what is suggested! Plan now for what makes the most economical sense for you. Consider your specific action threshold in terms of how close you feel you can allow this disease to approach your farm before you take action. Also consider whether you prefer preventative or curative type treatments. You can wait. No problem. However, we all tend to be a bit more emotional and more bias during imminent threats. So plan now while things are calm, write it down and hold to it. You will most likely make a better decision as well as spend less money.

### SOYBEAN CONTEST RULES

In the last newsletter, the new incentive for producers to push for 100 bushels/acre was announced. The final rules have been established.

The North Carolina Soybean Producers Association has committed up to \$5,000 to the first soybean producer to exceed 100 bu/ac in the state Soybean Yield Contest. The following conditions apply:

- The crop is entered in the annual state Soybean Yield Contest and verified on a minimum of 3.0 continuous acres.
- If more than one producer exceeds 100 bu/ac, the award will be made to the highest of the yields.
- The winner will receive \$2,500 for attaining the highest over 100 bu/ac. An additional \$2,500 will be added IF the producer is a member of the American Soybean Association *at the time the crop is planted*.
- Yield applicants are subject to the rules of fair play and must be verifiable.
- All legal agronomic practices are allowed. (Irrigation, fertility, pesticides, "snake oils,"etc. )
- Winner agrees to share all aspects of production in order to accept the award.

*What can you do to increase the chances of winning?* Consider some observations and suggestions from NCSU Soybean Specialists.

- Plant following some other crop than soybeans on a productive soil
- Well managed no-till soils are preferred over well managed conventional tillage
- Use the higher end of fertility recommendations
- Plant full season soybeans and aim to have them planted by May 8<sup>th</sup>
- Plant narrow rows (20" or less) at about 100,000 seeds per acre
- Ignore cyst nematode resistance when selecting varieties. However, slight preference can be given to one that matures slightly earlier if all other variables are the same.
- Lower economical thresholds. Scout weekly and aim to minimize all manageable potential stresses (Ignore the weather, can't do anything about it anyway).

- All trips in the field after a rain (including planting) should be at least one day later than you normally would make. (Soil compaction is a real issue. Traveling on wet or moist soils tends to make matters worse.)
- Consider a strobilurin fungicide on the contest site.
- Harvest as quickly as possible when fields reach about a 13% moisture threshold.
- Take the additional time to measure the field with a tape rather than a wheel. Include all sides and a diagonal measurement.
- Don't skip church!

GOOD LUCK!

### PRECISION VEGETABLE SEEDER

Mark Seitz, Commercial Horticultural Area Agent serving Craven County applied for and received a grant to purchase a precision vegetable seeder. Grant funds were secured from the Rural Advancement Foundation to purchase this equipment from StarCo Manufacturing. The seeder will be available for producers within Jones, Onslow, Craven and Lenoir counties on a first-come basis. A rental fee and rental agreement will be announced at a later date. A demonstration of the unit will be held soon. A representative of StarCo and Mark Seitz will lead the demonstration. A firm date and location has not been set. If you have considered commercial vegetables or specialty crops, contact Mark Seitz at 448-9621 for more information.

### EXAMINING CORN NUTRIENT PROBLEMS

Below are some symptoms of common nutrient deficiencies.

<u>Deficiency</u>	<u>Symptom(s)</u>
Phosphorous	Purple margins on leaf edge (usually temporary)
Sulfur	Yellow leaves (sometimes only on the older leaves ), smaller plants, interveinal chlorosis
Copper	Yellow leaves, smaller plants, some interveinal chlorosis possible, leaf tip dieback
Manganese	Yellow leaves, smaller plants, interveinal chlorosis, some necrosis if severe
Magnesium	Yellow leaves, interveinal chlorosis on older leaves, leaf curl

Notice anything? Just about all signs of early corn problems include some yellowing and/or interveinal chlorosis. Add to that a bit of minor insect damage, wind, rains, nematodes or cold soils, and early season

corn can be extremely difficult to diagnose. Before you take corrective action, make sure you are applying the correct material(s) by submitting a soil and tissue sample to the NCDA. If you would like assistance, please call our office. We will be glad to visit the fields with you.

Forms and information for submitting tissue or problem soil/nematode samples can be found at <http://agronomy.agr.state.nc.us/> or from our office. Soil samples are free. However, Nematode Assays are \$3 and Tissue Samples are \$5.

### EARLY SEASON CORN INSECTS

Typically armyworms, billbugs, wireworms, cutworms, flea beetles and stalk borers may be a sporadic problem. Except for flea beetles, thresholds are listed below.

**Thresholds for Seedling Insect Pests.** These thresholds assume a full stand; reduce the threshold by 1/3 if thin stands are encountered.

- *Armyworm* -- 20% of small seedlings (to 6 leaf stage) with significant leaf feeding or 70% of plants past the seven (7) leaf stage and armyworms present
- *Billbugs* -- 5% seedling loss in infested areas
- *Cutworms* -- 10% cut seedlings
- *Stalk borers* -- 10% seedlings infested
- *Soil insects (wireworms, rootworm, seed corn maggot)* -- no threshold. Record damage for historical purposes, to evaluate soil insecticide program.

#### Threshold for Whorl Feeding Pest

When all samples are taken determine the following:

1. Calculate the *percent damaged plants* by dividing the total number of damaged plants by total number of plants examined and multiply by 100.
2. Calculate the *average number of caterpillars per damaged plant* by dividing the total number of caterpillars found by the number of plants examined. These two figures are then multiplied to give a field score:

$$\% \text{ damaged plants} \times \text{number of larvae per plant} = \text{score}$$

Compare this score to the threshold for the appropriate insect. This dual scoring technique is necessary because fields showing high leaf feeding will often have low caterpillar numbers due to rainfall or other natural causes that have killed most caterpillars.

*Corn earworm and fall armyworm* -- a minimum score of 75 must be met before treatment is warranted.

*First Generation European Corn Borer* -- a minimum score of 125 is needed before treatment is warranted.

### FORESTRY MEETING

On May 12<sup>th</sup> at the Duplin County Extension office in Keanansville, NC a meeting, *Working Forest*

*Summit for Landowners*, will be held from 9:00 am - 3:15 pm. This meeting will cover topics such as, NC Use Value Property Tax, income & estate planning, management for wildlife & profit, and forestry herbicides that enhance growth and wildlife. A panel of experts and forestry owners will also speak along with the keynote speakers, Bill Ross, Secretary NC Dept. of Environment & Natural Resources and Richard Rogers, Director of Conservations and Community Affairs. To register for this meeting, either visit the web site, [dfr.state.nc.us](http://dfr.state.nc.us) or call (919) 733-2162, ext. 201.

### TSWV PREDICTIONS

Below are comments from NCSU Extension Specialists and Researchers regarding the potential of TSWV in the upcoming weeks. Time will tell whether our models and predictions are accurate. Use the comments as you see fit.

*COLUMBUS, CRAVEN, DUPLIN, JONES, LENOIR, PENDER, ROBESON, AND SAMPSON COUNTIES (SOUTHEASTERN COUNTIES):* Thrip populations are higher than normal for this time of year in this region. Numbers of tobacco thrips are flying now, and they will continue to fly for the next month or more. We have detected virus movement from winter annuals to uninfected "sentinel" plants at several sites in this region. Virus movement should be expected to intensify well into May as the thrips flight intensifies. This means that tobacco transplanting in this region will be taking place while increasing numbers of infectious thrips are moving. Therefore, higher than normal rates of TSWV infection in tobacco should be expected.

### CALIBRATION CORNER

Calibrating equipment is a benefit for the environment as well as production. A 10% error in application can literally cost several hundreds to thousands of dollars depending upon the cost of the product, number of acres applied and number of treatments. Too, if the error results in a lower amount than needed, poor results can result. Below are some pointers and useful conversions that may assist. The calibration method outlined is often referred to as the 1/128<sup>th</sup> of an acre method. It is one of the simplest to use and very accurate. Another advantage is that it will work for broadcast and band widths without the "guessing" factor!

#### 1/128<sup>th</sup> of an Acre Calibration Method

1. Determine the average nozzle spacing (in inches)
2. Determine the distance to drive as follows:  
Distance to drive = 4,084 / Avg. Nozzle Space
3. Measure off this distance in the field. Fill your tank half full of water and travel this distance several times. (Use the desired gear, throttle speed, exact nozzle pressure and engage all equipment that will be in use when traveling this distance) Calculate the average time needed to travel this distance.
4. Adjust the pressure to the level that will be used in the actual spraying operation. Catch the output from each nozzle separately for the exact length of time as calculated from Step 3, above.
5. Determine the average nozzle output (if any is more

than 10% from the others, it should be replaced). Each ounce caught equates to one gallon of sprayer output per acre.

6. Determine how many acres the volume of spray (full tank) will cover as follows:

Gallons of spray (tank)/Gallons per acre= Acre covered

7. Determine the amount of pesticide to add to the tank as follows:

$$\text{Amount to add to tank} = \frac{(\text{acres covered})(\text{broadcast rate per acre})(\text{band width})}{\text{row spacing}}$$

Example:

1. Spray Boom has 19" spacing
2.  $4084/19 = 215$  ft.
3. It takes 25 seconds to travel this distance.
4. Output caught from each nozzle in 25 second is 12 ounces. Thus, you are applying 12 gallons/acre
5. Your tank is 240 gallons;  $240/12$  gal per acre = 20 acres covered per tank
6. The desired rate of product is 1.5 pts/ac. Thus, 20 acres covered per tank X 1.5 pts = 30 pts needed.

To make the adjustment for banding, simply use this formula:

$$\frac{(\text{Acres covered})(\text{Broadcast rate per acre})(\text{Band width})}{\text{Row width}}$$

For example, assume the same information from above but now an 18" band is needed. Row width is 38".

$$\frac{(20 \text{ acres covered})(1.5 \text{ pts/ac})(18" \text{ Band})}{36" \text{ row spacing}} = 14.2 \text{ pts.}$$

For the banding, 14.2 pts per tank are needed.

Hooded sprayers present some unique considerations since there are so many variations. First, consider units that are plumbed to independently apply different chemicals from two separate tanks, one for post directed sprays under the row and another for the row middles. These units simply require the same calibration method done twice. One for post-directed treatments and the other for a band. The post directed treatments simply accommodates the average nozzle spacing. For example, assume you have 40 inch rows and want to post direct a 16" band with two nozzles. The average nozzle space is  $40/2 = 20$  inches. Using the 4,084 figure from above we find we must travel 204 ft. If it takes 30 seconds to travel that distance and each nozzle catches 6.5 oz in that time, you are applying 6.5 gallons per acre. If you have a 200 gallon tank, you will cover 30.8 acre ( $200/6.5$ ). Use the same formula as above to determine the amount of product to add:

$$\frac{(30.8 \text{ acres covered})(1.0 \text{ qt/ac product})(16" \text{ Band})}{40 \text{ inch row}} = 12.3 \text{ qts}$$

Likewise, the application for the row middle will follow the same process but will assume a 24 inch band and average nozzle space will depend upon whether the hood has one, two or three nozzles.

Often those plumbed for one tank applies roughly 12-15 Gal/ac directed to the row and 25-35

Gal/ac to the row middle. Thus, it is often impossible to apply the same rate of herbicide in the row and in the row middles unless one finds the right combination of nozzles that apply a volume as close to each other as possible. If you use the "average" of all of these nozzles then the result is likely to be that only 2/3<sup>rd</sup> of the desired rate will be applied to the row and almost 2X in the row middle! Check your nozzle output!

Many directed spray nozzles are OC-02 tips which are rated to put out 0.2 gallons per minute at 40 psi. Using the formula

$$\frac{(\text{width of nozzle under the hood})(\text{output of nozzle directing})}{\text{width covered by each nozzle directed under the row}}$$

will result in  $(24")(0.2)/6 = 0.8$ . Thus, the nozzle needed under the hood would need to apply 0.8 gallons/minute at 40 psi. A nozzle such as a 8008 should be sufficient.

Alternatively if it is desired to switch the post directed nozzle to a smaller one (8001 or 80015 for example) the same formula and process would result in selection of an 8004 tip under the hood.

Once nozzle selection is made such that the output rating is similar, simply follow the same 1/128<sup>th</sup> method that we have discussed here.

A few things are noteworthy. First, note that the 40 psi used to rate nozzles is just that, a rating. It is not suggested that you apply with that much pressure. Secondly, other methods of calibrations will work. If you have a favorite and it works, use it. Just make sure you don't "combine" methods. Combining different formulas and processes just makes matters more confusing! Lastly, nozzles vary greatly. Use the appropriate charts and information created by the manufacturer for information.

### REFLEX SECTION 18 LABEL

Through assistance from Commissioner Troxler a Crisis Exemption has been established so that we can now apply Reflex as a preemergence material. This effort will provide us another tool to assist in management of glyphosate and ALS resistant pigweed. Below are a few highlights:

- Time period of the exemption is from April 21 to July 1, 2006.
- Application method is for preplant burndown up to 14 days before planting or preemergence right after planting. DO NOT put on emerged cotton. (Even just barely beginning to emerge.)
- Use only on coarse-textured soils. Do not use on medium or heavy soils (injury concerns)
- The label mentions irrigation or rainfall needed within 7 days for activation of the product
- Can mix with Gramoxone or glyphosate if in no-till or reduced-till systems.
- Can mix with any registered PRE herbicide. Most commonly mixed with Prowl, but could also be mixed with Cotoran, Caparol, Direx, or Staple. (Note that the label mentions mixing with Dual. DO NOT apply Dual preemergence or preplant to cotton)
- Note the minor rotational restrictions that differ from the soybean label. Rotation restrictions for corn, peanuts is 12 months. For other crops not labeled,

- 18 months.
- Use rates: 1 to 1.5 pt/acre but for most of us, we should use 1 pint.
- *The Crisis Exemption label must be in the user's possession.* Otherwise, you will be in violation and subject to fines and penalties.

**NEWSLETTER REQUEST  
RENEWAL**

As mentioned in last newsletters, we are in the process of updating our mailing addresses and gathering information to make mailing more efficient. If you have already turned in your request form, thank you. If not, please contact our office at 633-1477 to request a form or visit our web site <http://craven.ces.ncsu.edu/> and then click on "News" or go directly to the link at <http://craven.ces.ncsu.edu/files/library/25/2006NewsletterRequestForm.pdf> to download a form. If we do not receive this information, you will no longer receive this newsletter and similar information. Thank you for your assistance with this matter.

**ETHANOL GRAIN PRODUCTION  
MEETING IN PLYMOUTH**

Agri-Ethanol and the economic development representatives in our area are conducting a meeting on Tuesday, May 2<sup>nd</sup> at the Vernon James Research and Extension Center in Plymouth, NC. The meeting will begin with a complimentary BBQ dinner at 6:00 p.m. The objective of the meeting is for the ethanol company to express their desire to purchase local grain and identify the types of grain needed to meet their requirements for ethanol production. If you are interested in attending, please contact our office at 633-1477 to register.

**PESTICIDE MEETING**

If you need additional pesticide credits or have an interest to hear from NCDA inspectors regarding common mistakes that could lead to fines and penalties, plan to attend the meeting, **Avoidance of Pesticide Violations**, Tuesday, on May 9<sup>th</sup> from 6:00- 8:00 pm at the Craven County Agricultural Building. Information presented will cover transportation, handling, storage and application issues which may result in non-compliance of current pesticide regulations. Two hours of L, N, D & X will be offered. Call our office at 633-1477 to register.

**NICKELS FOR KNOW HOW**

As a reminder, the "Nickels for Know How" voting will be held on May 25, 2006 from 9:00am – 3:00pm at the sites listed below. Every person that uses feed or fertilizer is eligible to vote. Funds obtained from the \$0.15 per ton assessment is used to fund research, teaching and extension projects. Please make plans to vote. If you would like additional information, please contact our office.

**Voting Locations for May 25th**

- Cooperative Extension Office, 300 Industrial Drive, New Bern
- Cove City Fertilizer, 107 Sunset Blvd, Cove City
- Dixie Chemical & LP Gas, 504 Old Cherry Point Road, New Bern
- Havelock Recreation Center, 1 Recreation Drive, Havelock
- Royster-Clark, 8542 US Hwy 17, Vanceboro,
- Yoder Farm Supply, 4100 Hwy 118 (near Vanceboro)

Mike Carroll  
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