



## *Cotton Insect Newsletter*

Volume 2, Issue #8

Edisto Research & Education Center in Blackville, SC

28 June 2007

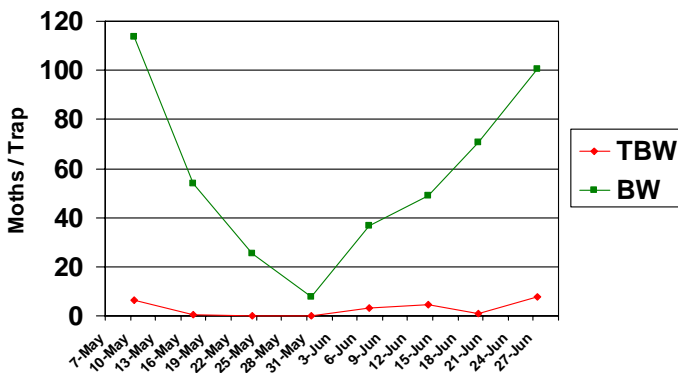
### Crop Situation

The USDA NASS South Carolina Statistical Office had our progress at 25% squaring for 24 June 2007, behind the 5-yr average of 34%. As of the same date, none (0%) of the crop is setting bolls, behind the 5-yr average of 3%. About 6% of the state's cotton crop was reported to be in excellent condition. The remainder was reported as 52% good, 37% fair, 5% poor, and 0% very poor. These are observed/perceived state-wide averages.

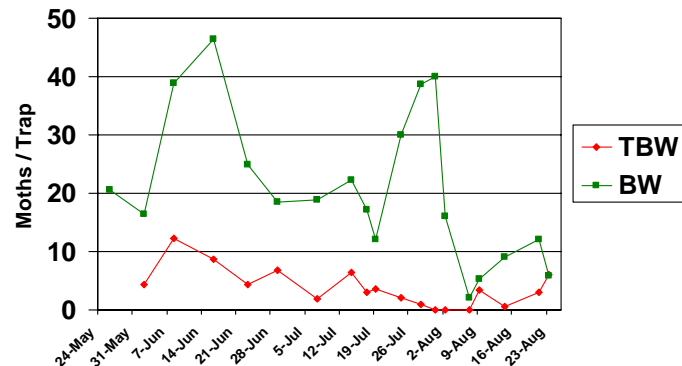
### Tobacco Budworm & Bollworm

Captures of adult tobacco budworm and bollworm in pheromone traps at EREC for this season and last season are pictured below. We detected an increase in tobacco budworm moths, and levels of bollworm moth capture continue to climb. The level of bollworm capture for this past week is more than twice that of any peak in captures last year. We have more corn planted at EREC this year than last year, and that should be representative of corn acreage in the state as well. It looks like we will be in for a year with heavy pressure from corn earworm in cotton. As we enter July, start looking for eggs in cotton just before and at first bloom. Corn will not be an attractive host soon, and cotton will "look good" to adult female bollworm/corn earworm.

**Pheromone Trap Capture (EREC - 2007)**



**Pheromone Trap Capture (EREC - 2006)**



### News from Above the Lakes

No news to report this week. This is your turn for input – send your comments and observations to me.

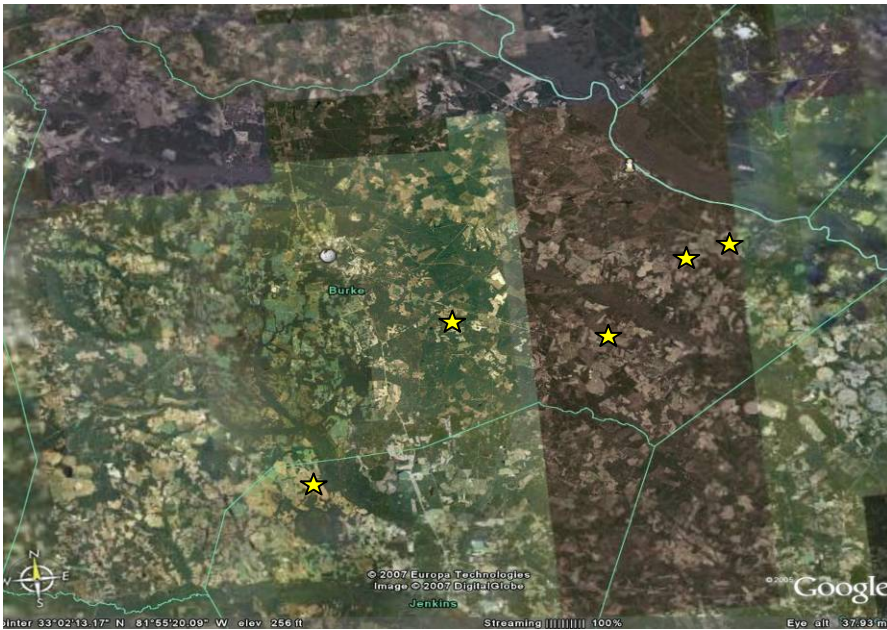
### News from Below the Lakes

Mike Sullivan (Retired Research Entomologist) reported that things are quiet in the cotton he is checking. Tommy Walker, county agent in Hampton/Jasper Counties, reported that things were quiet as well, but pointed



out that this was the time to check for problems with sucking bugs that can be a problem in selected fields. See “Plant Bugs & Stink Bugs” on next page.

Just across the Savannah River in Georgia, Will Duffie, county agriculture agent in Burke County, GA, surveyed 100 ears of corn late last week in 5 fields (see below) and found that 93% were infested with at least one corn earworm larvae. According to him, this was not the case last year – there were not as many (25-30% last year). Sizes (ages) of the caterpillars were extremely variable, indicating that pupation and emergence of adult moths will likely be a sustained event (i.e. we could be in for heavy bollworm pressure and for a long period as well).



### **Changes to Product Labels**

Be aware that some product labels change frequently and that the label is “the law”. One of the recent changes to labels pertains to a product that gets much use in the “Cotton Belt” and here in the Southeast – Bidrin 8 insecticide. Bidrin is often used for control of plant bugs and stink bugs. Existing stocks of Bidrin can be used according to the old label on the container, but label changes for new productions of this product will be:

1. 3.2 oz limit prior to squaring (one application of 0.2 lb ai/acre limit before squaring)
2. 16 oz limit after first bloom (1.0 lb ai/acre limit after first bloom)
3. REI changed from 2 days to 6 days
4. A minimal interval of 14 days between applications
5. A closed-handling system will be used by mixers and loaders



### Plant Bugs & Stink Bugs

The complex of sucking bugs will soon require attention in cotton. The first concern will be potential problems with plant bugs near the first week of bloom. Check fields for plant bugs with a drop cloth (a.k.a. shake sheet, beat sheet, etc.) or something you can put on the ground over which you can shake plants. Regardless of what some might say, you cannot adequately see insects dislodged onto the ground – you just cannot see all of them. So get a drop cloth – you can make one out of canvas and a couple of dowel rods sewn on the sides. The dimensions should be 3 x 3 feet. You can use black (left picture below) or white canvas (right picture below). Black canvas has been shown to be better at seeing small green plant bug nymphs, and white canvas is better for seeing stink bugs. Ideally, we should probably use black drop cloths before bloom and during the first couple of weeks of bloom and then switch over to using white canvas cloths to finish the season looking for stink bugs.



If you exceed 1 plant bug per foot of row, treatment might be required. You will want to consider the potential impacts of treating and not treating for plant bugs at or near threshold. Decimation of predaceous insects immediately preceding a large flight of bollworm could have dire consequences. With no assistance from the predators, cotton (including all of the Bt cottons) can be overwhelmed by bollworm. So, make sure you have a problem with plant bugs before you treat and consider what might happen in addition to controlling plant bugs. Also, make sure you are properly identifying the bugs. There are many false chinch bugs and bigeyed bugs out there right now that could be improperly called plant bugs by a speedy or new scout. All of these bugs are about the same size. I have attempted below to represent how the adults might look in size relative to each other.



Bigeyed bug



False chinch bug



Tarnished plant bug



Cotton fleahopper



Nymphs are similar in size as well, depending on age, and can also be confusing if you are not closely looking at them. Below are probably the ones that could be confused easily by the beginning scout. These late-stage nymphs are easier to identify than the very small ones. The small ones must be looked at closely to tell them apart. Color is a good clue. Nymphs of bigeyed bugs have a blue-gray color (at least our prominent species), and nymphs of tarnished plant bugs are pale green. Both can run quickly on the drop cloth, so go by the color.



Bigeyed bug nymph (predator)



Tarnished plant bug nymph (pest)

Here are our current recommendations for controlling plant bugs:

**PLANT BUGS (COTTON FLEAHOPPER AND TARNISHED PLANT BUG)**

Product	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
acephate		0.25-0.75		24 hr	21 d	
Orthene 97	4.1-12.3 oz		-			
Orthene 90 S	4.4-13.3 oz		-			
Acephate 90 S	4.4-13.3 oz		-			
acetamiprid		0.05		12 hr	28 d	Ovicidal activity on caterpillars
Assail 70 WP	1.1 oz		-			
Intruder 70 WP	1.1 oz		-			
imidacloprid		0.031-0.062		12 hr	14 d	
Trimax 4 SC	1.5-2.0 oz		64-83			
Trimax Pro 4.44 SC	0.9-1.8 oz		71-142			
thiamethoxam		0.05-0.0625		12 hr	21 d	5 oz limit for season
Centric 40 WG	2.0-2.5 oz		-			
flonicamid		0.089		12 hr	30 d	
Carbine 50 WG	2.8 oz		-			
dicrotophos (R)		0.25-0.5		6 d	30 d	16 oz limit post bloom
Bidrin 8 E	4-8 oz		16-32			
oxamyl (R)		0.25-0.5		48 hr	14 d	
Vydate 3.77 CLV	8.5-17.0 oz		7.5-15			

*Clemson University offers its programs to all eligible persons, regardless of race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status, and is an Equal Opportunity Employer.*

*The mention of any commercial product in this publication does not imply its endorsement by Clemson University over other products not named, nor does the omission imply that they are not satisfactory.*



Plant-bug injury to squares rarely causes economic problems in South Carolina. An economic problem could develop if an early-maturing variety was planted late, an average of one plant bug per foot of row is detected using a beat cloth or beat pan, or 25% or more of pinhead squares have been lost. Pyrethroid insecticides generally provide control of plant bugs when applied at bollworm control rates. Avoid treating *Bt* cotton for plant bugs unless absolutely necessary in June and July as subsequent reductions in beneficial populations often trigger problems with bollworms, beet armyworms, or fall armyworms. Plant bugs may also injure small bolls in a like manner to stink bugs. Use a treatment threshold of 20% injury to quarter-sized bolls for combinations of plant bugs and stink bugs feeding on small bolls.

That pretty much covers plant bugs. We will discuss stink bugs more in the weeks to come.

### **Printed Cotton Insect Recommendations**

Copies of "Cotton Insect Management" (IC 97) recommendations are available at your local county office. You can visit the following website for an electronic version of the recommendations:

<http://www.clemson.edu/psapublishing/pages/ENTOM/IC97.PDF>

### **Need More Information?**

Log on to the following webpages to view important cotton management recommendations, data, and historical cotton insect newsletters:

<http://www.clemson.edu/edisto/cotton/cotton.htm>

<http://www.clemson.edu/scg/ipm/cotton.html>

Sincerely,

Jeremy K. Greene, Ph.D.

Cotton Entomologist

[green4@clemson.edu](mailto:green4@clemson.edu)

803-284-3343 (office)

803-300-1160 (mobile)



Visit our website at:

<http://www.clemson.edu>

---

*Clemson University offers its programs to all eligible persons, regardless of race, color, national origin, religion, gender, age, disability, marital or veteran status, or any other legally protected status, and is an Equal Opportunity Employer.*

*The mention of any commercial product in this publication does not imply its endorsement by Clemson University over other products not named, nor does the omission imply that they are not satisfactory.*