



# Cotton Insect Newsletter

Volume 2, Issue #12

Edisto Research & Education Center in Blackville, SC

26 July 2007

## Fall Field Day

This is a reminder that you are invited to our Fall Field Day at the Edisto Research and Education Center near Blackville, SC, on 6 September 2007. Registration will begin at 9:00AM. Tours and programs will begin at 9:30AM. Lunch will be from 12:00 to 1:00PM. The cotton/soybean program will be immediately after lunch. An early copy of the program will be available and distributed soon.

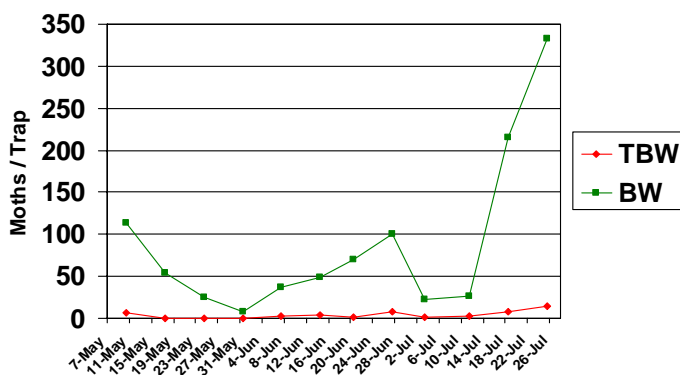
## Crop Situation

The USDA NASS South Carolina Statistical Office had our progress at 82% squaring for 22 July 2007, just behind the 5-yr average of 87%. As of the same date, 14% of the crop is setting bolls, well behind the 5-yr average of 34%. About 3% of the state's cotton crop was reported to be in excellent condition. The remainder was reported as 48% good, 40% fair, 8% poor, and 1% very poor. These are observed/perceived state-wide averages.

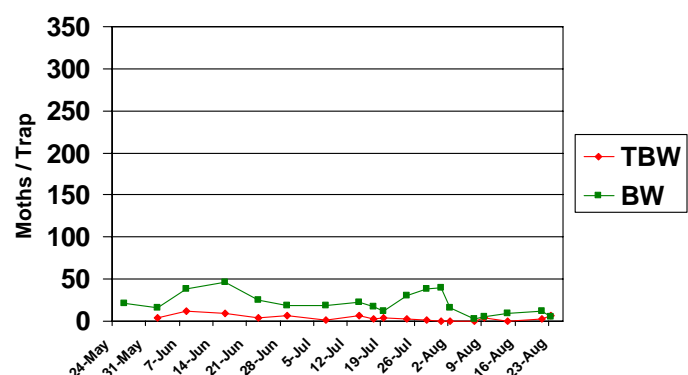
## Tobacco Budworm & Bollworm

Captures of adult tobacco budworm and bollworm in pheromone traps at EREC for this season and last season are pictured below. Again, we detected an increase in tobacco budworm moths and large increases in bollworm moth captures this past week. The scales on the 2007 and 2006 charts are the same and demonstrate how much larger our bollworm numbers are this year compared with last year. The numbers from this past week are almost seven times our highest weekly capture all of last year.

Pheromone Trap Capture (EREC - 2007)



Pheromone Trap Capture (EREC - 2006)



Bollworm eggs are everywhere in cotton this week, as are the female moths that put them there. I observed about one moth “flush” per 10 feet in a cotton field on the station this morning. Medium to large worms and numerous damaged squares, blooms, and bolls are easy to find in untreated plots of non-Bt cotton. Most of the non-Bt cotton other than structured refuge fields still required for Bollgard and WideStrike should have been

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treated by now. Remember that areas planted as a refuge for Bollgard 2 cotton ONLY can now be treated for caterpillar insects. With egg counts still high in many places, fields of Bollgard cotton (1st generation Bt) will likely need treatment if egg counts exceed 75+ per 100 plants. Again, Bollgard 2 and WideStrike (2nd generation Bt) should be ok regardless of egg numbers. You need to check those advanced Bt cottons for square and boll injury from caterpillars and for larger escaped worms. There is no need to waste money on worm sprays in Bollgard 2 and WideStrike unless there are escapes. Allow the technology to work before treating Bollgard 2 and WideStrike for bollworm.

Stink Bugs

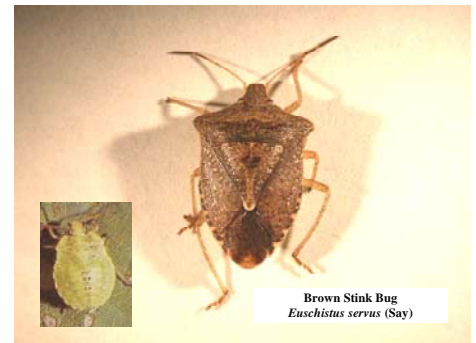
As cotton enters the 3rd through 5th weeks of bloom, we should be particularly concerned about injury from stink bugs. The following pictures show the three most prevalent species of stink bugs in South Carolina and much of the Southeast. The chart below the photos shows the breakdown for the three species in North Carolina, South Carolina, and Georgia. In tests where we monitored species composition, we had an approximate equal number of green and southern green stink bugs and a small percentage of brown stink bugs in South Carolina last season. During the last several years, the southern green stink bug and the green stink bug have been the predominant species in Georgia and North Carolina, respectively. I have seen many brown stink bugs this year early, so keep an eye out for that species. However, when stink bugs are a problem, it is typically one of the "green" species that causes most of the problems in a "bug year". That being said, the pyrethroid insecticides should do a fine job on the complex as a whole and control any escaped bollworm in Bt cotton. Consider adding an organophosphate (Bidrin, Orthene, Acephate, Methyl Parathion) or carbamate (Vydate) to the tank-mix if many of the stink bugs are brown or if the infestation is particularly heavy.



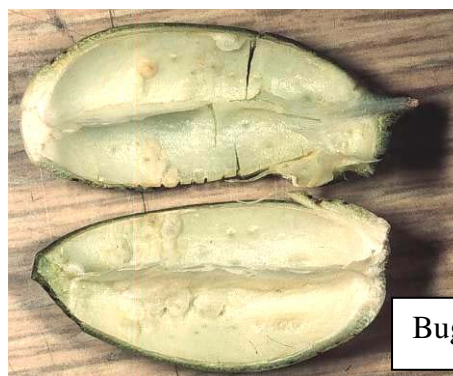
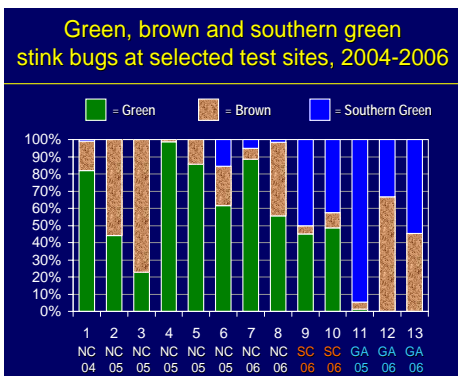
Green Stink Bug Acrosternum hilare (Say)



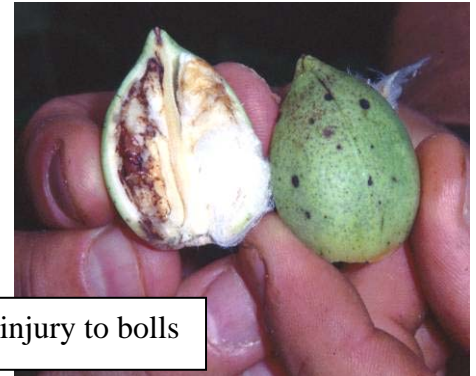
Southern Green Stink Bug Nezara viridula (L.)



Brown Stink Bug Euschistus servus (Say)



Bug injury to bolls



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Here are our recommendations for managing stink bugs with insecticides in cotton:

**STINK BUGS**

Product (non-pyrethroids)	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
dicrotophos (R) Bidrin 8 E	6-8 oz	0.375-0.5	16-21.3	6 d	30 d	16 oz limit post bloom
acephate Orthene 97 Orthene 90 S Acephate 90 S	0.52-0.77 lb 0.55-0.83 lb 0.55-0.83 lb	0.5-0.75	- - -	24 hr	21 d	
methyl parathion (R) Methyl 4 E PennCap-M 2	1 pt 2 pt	0.5	8 4	48 hr	7 d	
oxamyl (R) Vydate 3.77 CLV	13.6-17.0 oz	0.4-0.5	7.5-9.4	48 hr	14 d	

**STINK BUGS (continued)**

Product (pyrethroids)	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
bifenthrin (R) Capture 2 EC Discipline 2 EC Brigade 2 EC Fanfare 2 EC	2.6-6.4 oz 2.6-6.4 oz 2.6-6.4 oz 2.6-6.4 oz	0.04-0.1	20-50 20-50 20-50 20-50	12 hr	14 d	Control of spider mites at high rates
cyfluthrin (R) Baythroid 2 EC	1.6-2.6 oz	0.025-0.04	49-80	12 hr	0 d	
beta-cyfluthrin (R) Baythroid XL 1 EC	1.6-2.6 oz	0.0125-0.02	49-80	12 hr	0 d	
lambda-cyhalothrin (R) Karate Z 2.08 CS Karate 1 EC Silencer 1 EC	1.6-2.56 oz 3.2-5.12 oz 3.2-5.12	0.025-0.04	50-80 25-40 25-40	24 hr	21 d	
cypermethrin (R) Ammo 2.5 EC	2-5 oz	0.04-0.1	25-64	12 hr	14 d	
deltamethrin (R) Decis 1.5 EC	1.6-2.6 oz	0.019-0.03	50-80	12 hr	21 d	
esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05	13-22	12 hr	21 d	
gamma-cyhalothrin (R) Prolex 1.25 CS	1.28-2.05 oz	0.0125-0.02	63-100	24 hr	21 d	
zeta-cypermethrin (R) Mustang Max 0.8 EC	2.64-4.0 oz	0.0165-0.025	32-48	12 hr	14 d	

Treat when 20% of medium-sized bolls display symptoms of feeding injury and stink bugs are present. Begin scouting for stink bugs when small bolls appear. Consider using a 10-15% threshold during weeks 3-5 of bloom, as bolls developing during this growth stage are particularly susceptible. Randomly select at least 25-50 bolls (at least a quarter in diameter) per field. Break each boll open and examine the carpal walls, lint, and seeds for injury symptoms. Look for the

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presence of warty growths on the carpal walls and for discolored seed and lint. To ensure the accuracy of this sampling method, do not deviate from weekly checking of quarter-sized bolls. One may also rate an infestation based upon numbers of stink bugs by using a beat cloth or beat pan. When this method is used, an insecticide treatment will be warranted for 1 or more stink bugs per 6 feet of row. A 3-foot beat cloth may be used to scout for stink bugs. Carefully approach and shake the plants on at least 30 feet of row (10, 3-foot samples). Pyrethroids applied for bollworm control will generally provide control of stink bugs as well. Bidrin and methyl parathion should be used in fields with infestations predominated by brown stink bugs. Be especially vigilant for stink bugs in both *Bt* cotton and non-*Bt* cotton fields when no treatments are being applied for control of caterpillars.

### **News from Above the Lakes**

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

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### **Links to Laws & Regulations**

Dr. Bob Bellinger at Clemson University provided the following information that you will find informative:

At the web address (URL) below is a recent EPA document (pdf) titled "**Major Existing EPA Laws and Programs That Could Affect Agricultural Producers**".

**EPA Laws and Programs That Could Affect Ag Producers** (23 pages)

<http://www.epa.gov/oecaagct/agmatrix.pdf>

And on the topic of regulations, Dr. Bellinger has a page on his program web site that links to lots of them:

### **Pesticide Regulations**

<http://entweb.clemson.edu/pesticid/regulat.htm>

On that page you will find links to web pages such as:

**Major Environmental Laws** (EPA)

<http://www.epa.gov/epahome/laws.htm>

**Laws and Regulations Affecting Pesticides**

<http://www.epa.gov/pesticides/regulating/laws.htm>

### **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,

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