Cotton Insect Newsletter

Volume 3, Issue #15 **Edisto Research & Education Center in Blackville, SC** **21 August 2008**

Fall Field Day (2 Weeks Away***)***

Our annual Fall Field Day will be held at the Edisto Research and Education Center near Blackville, SC, on 4 September 2007. Registration will begin at 9:00AM. Tours and programs will begin at 9:30AM. Lunch will be from 12:00 to 1:15PM. The cotton/soybean/corn program will be immediately after lunch (1:30-3:30PM). Here is a short version of the program:

9:00 – Noon **Registration**
9:30 – Noon **Peanut Tour**
9:30 – Noon **Beef Cattle Tour**
Noon – 1:15 **Lunch and Indoor Program**
1:30 – 3:30 **Corn, Cotton & Soybean Tour**

Status of Cotton Crop

As of 17 August 2008, the USDA NASS South Carolina Statistical Office had our progress at about 88% of the crop reported to be setting bolls – that's ahead of the 5-yr average of 82% (although all of the crop should be well into setting bolls by now). About 1% of bolls were reported opening, with our 5-yr average of 5% open at this point. About 3% of the state's cotton crop was reported to be in excellent condition (that is up!). The remainder was reported as 24% good, 41% fair, 22% poor, and 10% very poor. These are observed/perceived state-wide averages.

Status of Soybean Crop

As of 18 August 2008, the USDA NASS South Carolina Statistical Office had our conditions for soybeans at 14% very poor, 27% poor, 41% fair, 15% good, and 3% excellent.

"Down in the Canopy"

Boll injury from bollworm was and continues to be extremely heavy in some of my research plots of non-Bt cotton. In fact, we have 100% losses in almost all plots of untreated non-Bt cotton. Some of the plots of single-gene Bt cotton (i.e. Bollgard; e.g. DP555) have sustained moderate injury. Even some of the dual-gene Bt cotton (WideStrike, Bollgard II) has received measurable injury. Obviously, significant pressure from bollworm exists in my research area, so it represents a worst-case scenario for testing these technologies – "the perfect storm", if you will. Ordinarily, these technologies provide good-excellent (Bollgard-WideStrike-Bollgard II) performance on control of bollworm, but we test them in the worst possible areas and decimate populations of beneficial arthropods (treatment with 1 lb of Orthene per acre) immediately before the bollworm flights begin. That being said, there is an important lesson to be learned about managing bollworm in single-

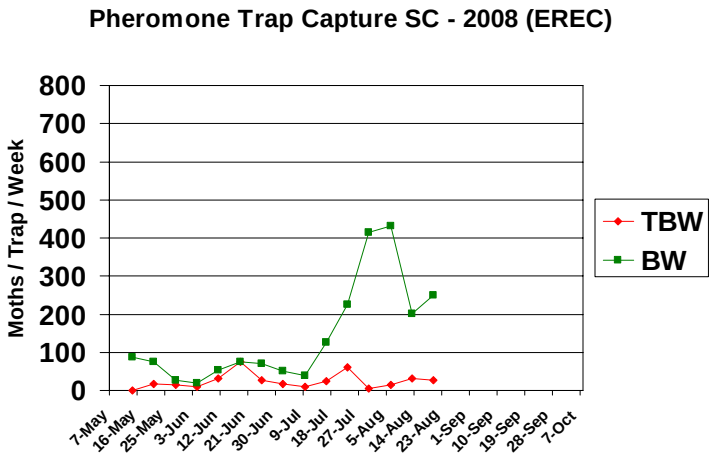
gene and dual-gene Bt cottons, especially in historical, high-risk areas. The first insecticide application is extremely important – cannot stress this enough. If you are considering spraying for something (stink bugs, plant bugs, or pre-threshold bollworm) in early-mid July before the bollworm flights really begin, you had better be sure of the need for it. Also, your choice of insecticide chemistry should be a pyrethroid insecticide on the first application. The longer residual control and activity on bollworm is very important here. I think that this is more important than any differences between pyrethroids and organophosphates on toxicity to beneficials – both provide broad-spectrum activity on beneficial arthropods, with only subtle differences in my opinion. The biggest difference is the activity and residual control of pests such as bollworms. Below are a few pictures I took this past week of bollworms feeding on several different varieties of non-Bt, first-generation Bt (DP555), and second-generation Bt cotton (WideStrike, Bollgard II). Also in the mix of photos are some shots of June beetles that commonly feed on the wounds left by bollworms and fall armyworms. They can get quite numerous in the field when boll injury is high and can be used as a warning that there is a damaged boll in the immediate area if you encounter them during scouting.

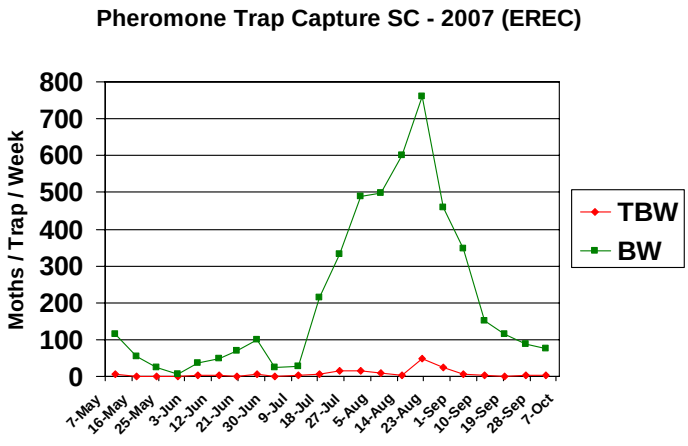
Pictures of bollworm injury to non-Bt, Bollgard, WideStrike, and Bollgard II cotton varieties. Note how the June beetles are "cleaning up the leftovers" from bollworm injury and congregating (top right photo) and as the bollworm crawls down the stem (bottom right photo).

Tobacco Budworm & Bollworm

Captures of adult tobacco budworm (TBW) and bollworm (BW) in pheromone traps at EREC this season and last season are pictured below. The scales on the 2008 and 2007 charts are the same to illustrate where we are compared with last year. We observed slightly increased captures of bollworm moths and slightly decreased captures of tobacco budworm this past week. Perhaps the cooler temperatures and general rainfall have impacted pheromone captures for the last couple of weeks. As I have stated before, the extended pattern of bollworm capture during 2007 was likely the result of tremendous variability in corn earworm emergence from corn that was very staggered in maturity due to the Easter freeze. Corn growth stages might be more in line this season.

Bollworm (left) and tobacco budworm (right)





News from Above the Lakes

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

News from Below the Lakes

A local consultant reported to me yesterday that he is not finding much in the cotton he is checking – "quiet" was the word he used. Another consultant is still seeing threshold numbers of bollworm in non-Bt cotton with potential to make a top crop. He and his grower will have to determine if the cotton protected would pay for the application – it would be the 5th application on non-Bt cotton (previous applications were for tobacco budworm, bollworm, and stink bugs). For the most part, fruit that is setting right now has a chance to significantly contribute to yield, but there are many factors that determine how well the "top crop" is (temperatures, rainfall, insect pressure, etc.). Also reported was that some other cotton was sprayed for spider mites with chlorpyrifos (Lorsban, etc.) at the highest labeled rate, and it worked well in cleaning up the mites.

Need More Information?

Log on to the following webpage to view important cotton management recommendations, data, and historical cotton insect newsletters: http://www.clemson.edu/scg/ipm/cotton.html

Sincerely,

Jeremy K. Greene, Ph.D.
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Visit our website at:
http://www.clemson.edu