



Cotton Insect Newsletter

Letter #10

Edisto Research & Education Center in Blackville, SC

7 July 2006

Newsletter Archives

Previous newsletters for 2006 are archived at <http://www.clemson.edu/edisto/cotton/cotton.htm>. Please distribute hard copies or electronic newsletter files to all interested, and please provide weekly input for the newsletter. Your observations and local knowledge are important – email or phone in your comments to me!

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Crop Situation

On 2 July 2006, the NASS reported our progress as 56% squaring, just ahead of the 5-yr average of 49%. About 6% of the crop is setting bolls, behind the 5-yr average of 7%. Only 6% of the state's cotton crop was reported to be in excellent condition. The remainder was reported as 50% good, 40% fair, 4% poor, and 0% very poor. These are observed/perceived state-wide averages.

News from Above the Lakes

Last week there was a report from several consultants north of the lakes. They reported observations of stink bugs and aphids primarily as growers were initiating PGR's. Also reported were some dead 1st instar worms in terminals of some 13-node PhytoGen/WideStrike cotton.

News from Below the Lakes

Dr. Mike Sullivan reported on Monday that “The aphids I saw in Orangeburg Co. last week are quickly multiplying; those fields today have moderate/heavy aphid infestations. I collected from one field last week (June 28) and sent the sample to Ark. Results are 2% infection from the fungus. I collected from the same area today and will send Wed. Not much else shaking in my fields; a few bollworm moths and a few stink bugs but certainly not enough to worry about this week. We need rain!!!!!!”.

Aphids

Continue to watch the aphids, but I suggest waiting to see what happens in the next few days. Heavy populations of aphids should quickly succumb to the aphid fungus that has been officially detected by the free service provided by cotton incorporated:

<http://www.cottoninc.com/Entomology/CottonAphidFungusSamplingService/?S=AgriculturalResearch&Sort=0>

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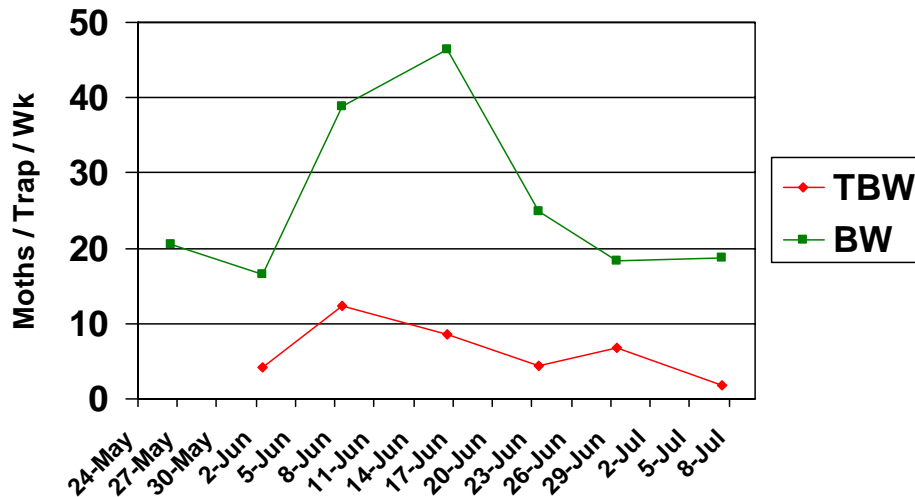
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Tobacco Budworm & Bollworm

Trap captures are again below 20 per trap for bollworm and down also for tobacco budworm at the Edisto Research & Education Center near Blackville, SC. Even though our trap numbers continue to decline, I am hearing more and more about seeing tobacco budworm moths in the field. We are also due for a big flight of bollworm.

Pheromone Trap Capture (EREC - 2006)



Stink Bugs

Cotton is blooming in many areas of the state now. That means we will have our first bolls soon, and we will need to start checking for injury from bugs. Because there are apparently quite a few stink bugs present already in many cotton fields, we need to be on top of the situation and not get behind. I normally recommend checking bolls for feeding symptoms during the second week of bloom – once you start seeing bolls big enough (at least the diameter of a quarter) to sample. Our threshold for stink bugs in cotton will be to treat with insecticide at 1 bug per 6 row feet or when 20% of medium-sized bolls display internal signs of feeding (warts, stained lint/seed) and stink bugs are observed. Use a drop cloth to detect bugs, and pull bolls for internal examination. Look at about 25 bolls per 20-30 acres. But remember that you reduce the chance for error by looking at more bolls. Pull the same age bolls each week. I like to pull bolls that are the biggest green bolls that are still “soft” to the “thumb squeeze”. Those bolls should be ½ to ¾ grown bolls that are about 14 days old. That size gives the best chance to detect feeding populations of bugs. Also remember that our 20% boll-injury threshold is NOT a representation of yield loss in the field. It does not mean that we are losing 20% of our crop to bugs. It is simply a measure of bug feeding on a small subset of bolls, an indirect sampling method for estimating the population of bugs. The threshold works and is the best recommendation we have to supplement sampling with a drop cloth. Insecticide choice can be important for stink bugs. The predominant species in cotton right now is the brown stink bug (BSB). In general, this species is very tolerant of the commonly used pyrethroid class of

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insecticide chemistry. So, if you are going to apply a pyrethroid for bollworm getting through on Bt cotton, do not expect good control of stink bugs if you have BSB as your predominant species of stink bug. The organophosphates are very good on all species of stink bugs but have little or no activity on bollworm. Those include dicrotophos (Bidrin 8E), methyl parathion (Methyl 4E, etc.), and acephate (Orthene, etc.). See past newsletter #8 for more information on insecticides for stink bugs.

Two Cents Worth – Automatic Sprays vs. Consultants, Thresholds and IPM

It might seem like a sure way to cover yourself from damaging cotton insects and save/make money, but let's consider what happens when automatic sprays go up against a good consultant using good techniques and established recommendations. This is all hypothetical, but humor me. Let's say that two producers (not too far into the future) each grow 1,000 acres of second-generation Bt cotton (i.e. Bollgard2, WideStrike, VipCot, etc.). The first producer decides that he is going to fire his consultant and spray every acre based on the calendar or schedule-spray every acre for insects. He decides that 2 foliar applications will cover him on thrips, 1 application will cover him on bollworm that might get through the Bt toxins, and that 3 applications will cover him on bugs for every field. What is that going to cost? Let's say that the insecticide he is going to use will for thrips will cost \$2.25 per acre, the insecticide for bollworm will cost \$3.50, and the insecticide for bugs will cost \$5.50 per acre. The application costs (fuel, equipment maintenance, labor, etc.) are going to cost \$4.50 per acre. The total costs for that program are going to be \$4,500 for thrips, \$3,500 for bollworm, \$16,500 for bugs, and \$27,000 for application costs. That program will cost \$51,500. The second producer decides that he is going to keep his consultant that practices good IPM. What does that likely end up costing him? If we use the same dollar figures as above but add in the consultant's fee per acre (\$8.00/acre) and use a likely scenario, let's see what this approach might cost. First of all, the second grower has committed \$8,000 to pay his consultant. His consultant checks each field at least once per week, most of it gets looked at twice per week during the critical weeks. He starts off the season by checking for thrips and injury and finds that about half of the acreage needs only 1 supplemental spray for thrips – that costs \$3,375. Later on, he determines that only 100 acres needs insecticide for bollworm – that costs \$800. The bugs required treatment on every acre, but because the consultant was looking at every acre, only about 200 acres was treated 3 times, 200 acres was treated 2 times, and the remaining 600 acres was treated only 1 time – that cost the grower \$6000 + \$4,000 + \$6,000 = \$16,000. So, the grand total was \$28,175 for the grower paying a consultant using sound practices to scout his fields – that is about half of what the grower using scheduled sprays ended up paying. Granted, this example represents an extreme case of calendar spraying, but it is not too far off from what would be needed to cover you if nobody was going to look at your cotton as a consultant would. Did the producer that used scheduled sprays make more cotton than the producer using a consultant and established thresholds? I say “no” because the applications recommended by the consultant were well-timed treatments – the “most bang for the buck”. At today's price for cotton, the grower that went with the scheduled sprays would have to make at least 5% more cotton every time to come out as well as the grower that stuck with his consultant. My math might be off here, so do your own. If you are thinking of going “automatic” in the near future, think about it again. For now, it does not matter how much technology we have in the plant, the role of the consultant cannot be deleted. The economics will not allow it. It is not going to pay to go “automatic” on every field during every year. Is this the year that you can afford to take that chance?

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Soybean Insects

If you would like to see information on insects important in soybeans on a regular basis, please let me know. With your help, I might be able to include some timely information on the insect situation in soybeans. For now, here is a label update:

Intrepid has now received a federal section 3 label for use in soybeans. See the following link for label information: <http://www.cdms.net/ldat/ld61K020.pdf>

Intrepid provides control of defoliating caterpillars such as loopers, armyworms, velvetbean caterpillar, etc. It will not control corn earworm at the recommended label rates, so a pyrethroid must still be used for that species.

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>

To see cotton insect newsletters for this year, go to the following webpage to view the cotton page at the Edisto Research & Education Center. <http://www.clemson.edu/edisto/cotton/cotton.htm>

We will continue to update this webpage in the coming months.

Sincerely,

Jeremy K. Greene, Ph.D.
Cotton Entomologist



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