



Cotton/Soybean Insect Newsletter

Volume 17, Issue #19 Edisto Research & Education Center in Blackville, SC 16 September 2022

Pest Patrol Alerts

Some of the information contained herein each issue is available via text alerts that direct users to online recordings. I will update the short message often for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter “y” to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

Updates on Twitter

When noteworthy events happen in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at [@bugdocisin](https://twitter.com/bugdocisin) on Twitter.



News from Around the State

Jonathan Croft, county agent covering Orangeburg County, reported that “there are some beans in my area getting sprayed for a second time for soybean looper. The first application for soybean looper was 4 to 6 weeks ago. Also, have some beans getting sprayed for stink bugs. Cotton defoliation has started and more acres will be defoliated very soon.”

Upcoming Field Day

Our final fall field day is next week (Thursday) at Edisto REC. Please join us for in-field tours and lunch.

- Agronomic Crop Field Day at the Edisto REC – 22 September 2022

Cotton Situation

As of 11 September 2022, the USDA NASS South Carolina Statistical Office estimated that about 40% of the crop has bolls opening, compared with 33% the previous week, 33% at this time last year, and 38% for the 5-year average. The conditions of the crop were 18% excellent, 47% good, 29% fair, 6% poor, and 0% very poor. These are reported statewide averages.

Cotton Insects

Bollworm – Overall, it was a low pressure year for bollworm here at Edisto, based on trap captures and field counts, but there were areas of the state that experienced heavy egg lays and larval pressure, putting some stress on 2-gene Bt cotton. But, generally, bollworm was not the problem it has been in the past. Take a look at the trap capture data from 2010, if you want to see a year where we had extreme pressure from bollworm. Below is one of my favorite aerial photos that captures how bad the bollworm pressure

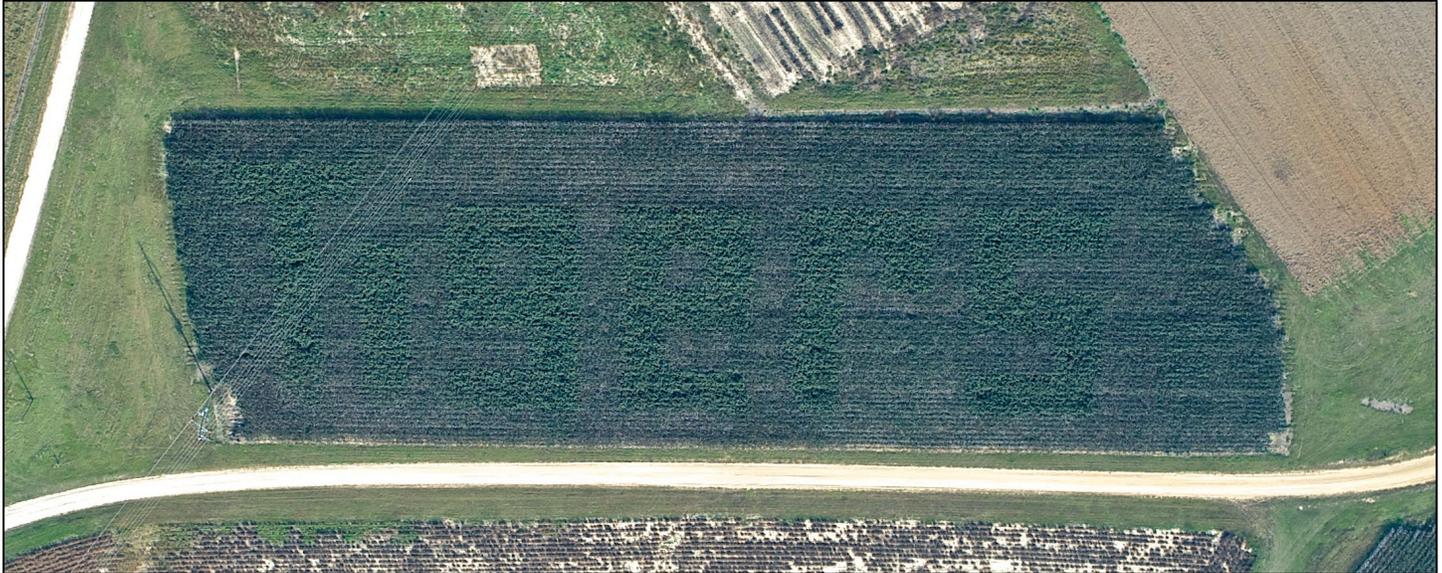
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was here that year. Many of you will remember this, but, briefly, this is an aerial shot of a 4-acre field where me and my technician planted non-Bt cotton spelling the word “Tigers” in block letters and filled in around that with Bollgard 2 cotton. The cotton came up, grew, and looked the same across the field until the end of the season, except for the rank cotton (first photo where you can just make out “Tigers”) that was completely void of any fruit because of the extensive injury from bollworm. In the bottom photo, you can easily see where bollworm survived and ate all of the fruit versus where bollworm fed on Bt toxins, died, and did not damage the cotton. It clearly demonstrated that bollworm uniformly deposited eggs across the field, with differential survival depending on larval location in the field. Bollworm remains a major pest.



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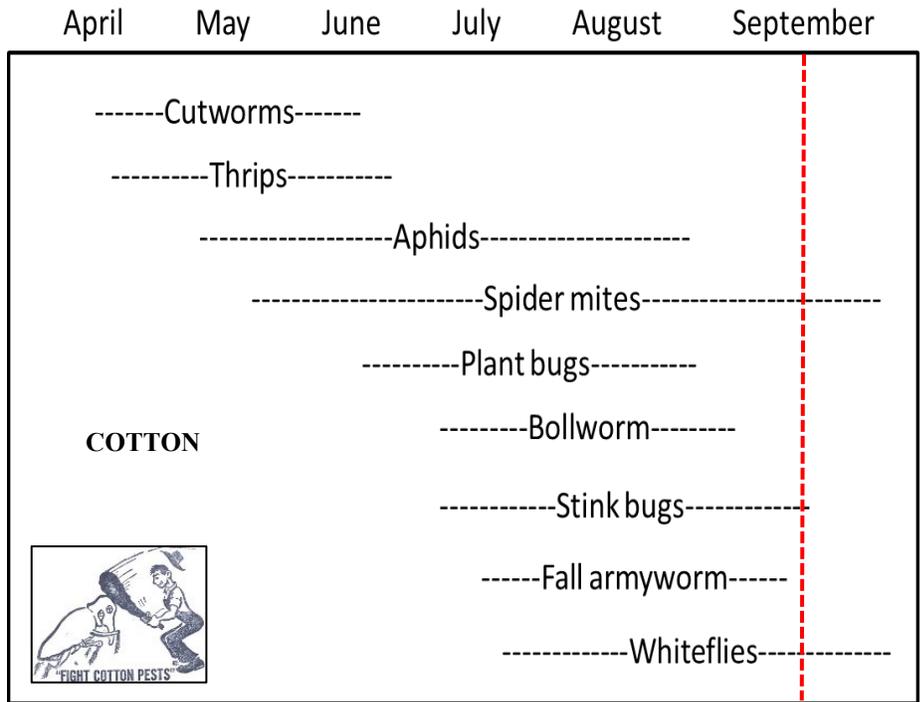
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Stink bugs – You can find stink bugs in the field all the way to the picker, but it is pretty much over for most cotton, with only the very late cotton remaining susceptible. You can see stink bugs until the end, though.



So, that is a wrap for insects in cotton for 2022. Thankfully, we don't deal with the whiteflies they fight in GA.



Soybean Situation

As of 11 September 2022, the USDA NASS South Carolina Statistical Office estimated that about 96% of the crop is blooming, compared with 94% the previous week, 95% at this time last year, and 96% for the 5-year average. About 74% of the crop is setting pods, compared with 66% the previous week, 72% at this time last year, and 74% for the 5-year average. About 10% of the crop is dropping leaves, compared with 5% the previous week, 4% at this time last year, and 3% for the 5-year average. The conditions of the crop were 13% excellent, 65% good, 17% fair, 3% poor, and 2% very poor. These are reported statewide averages.

Soybean Insects

As I stated last week, we are still dealing with migratory species of defoliating caterpillars, such as soybean looper (SBL), green cloverworm (GCW), and velvetbean caterpillar (VBC), especially VBC. Moths of VBC continue to be very abundant in soybeans around here, and larvae continue to eat and develop. We keep finding them in our counts, especially in untreated plots or those that were treated some time back. We will keep sampling those plots to see when the residual control breaks, if VBC keeps going. Almost any insecticide used recently in soybeans will likely provide some residual control of VBC, but if it has been a few weeks, residual control could be diminished, especially for SBL. I mentioned last week that I had some

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untreated soybeans that would be near 100% defoliation soon. Take a look at the progression in a short amount of time. Defoliation can occur quickly with unchecked populations of VBC.



Kudzu bugs and stink bugs continue to proliferate in some of my untreated soybeans, with more species than I have ever observed. We are still seeing green, southern green, redbanded, brown, brown marmorated, and red-shouldered stink bugs. Also present are predaceous stink bugs, such as the spined soldier bug, especially in soybeans with big numbers of VBC. On the next page are some side by side photos we took this week of immatures of the redbanded stink bug (left and top) and the red-shouldered stink bug (right and bottom). They look very similar as adults, but the nymphs are quite different. Use our published thresholds of 1-2 bugs per sweep or 1 bug per rowft (38" rows) **to the R7 stage** of growth.

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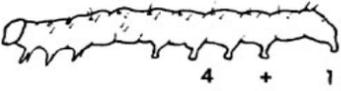
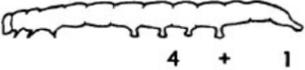
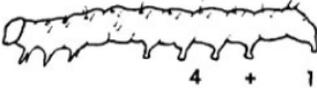
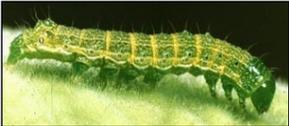


As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.

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(2017) Prepared by Jeremy Greene, Professor of Entomology

FIELD KEY TO COMMON SOYBEAN CATERpillARS

	 <p>4 + 1</p>	<p>CORN EARWORM 4 + 1 pair prolegs Curls up in hand Black "warts" on body</p>	
	 <p>4 + 1</p>	<p>VELVETBEAN CATERPILLAR 4 + 1 pair prolegs Very active when handled</p>	
	 <p>2 + 1</p>	<p>SOYBEAN LOOPER 2 + 1 pair prolegs Fatter at tail end Looping movement</p>	
	 <p>3 + 1</p>	<p>GREEN CLOVERWORM 3 + 1 pair prolegs Not fatter at tail end Looping movement</p>	
	 <p>4 + 1</p>	<p>TOBACCO BUDWORM 4 + 1 pair prolegs Curls up in hand Black "warts" on body</p>	

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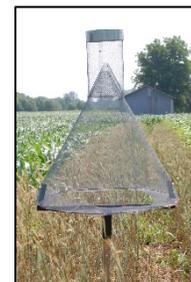


Bollworm & Tobacco Budworm

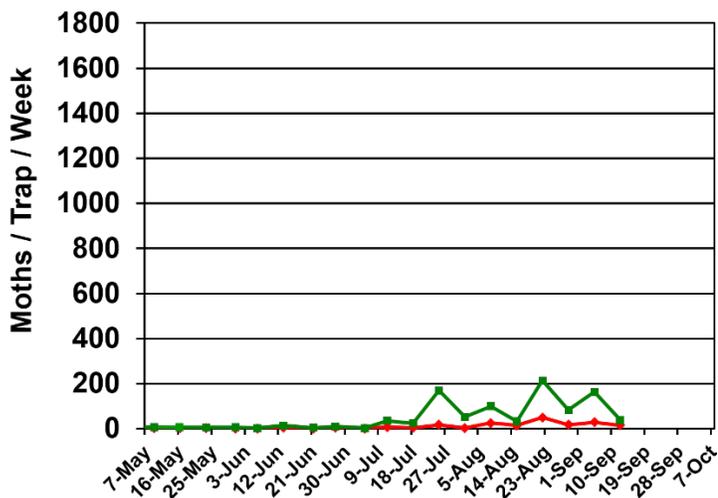


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2021 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

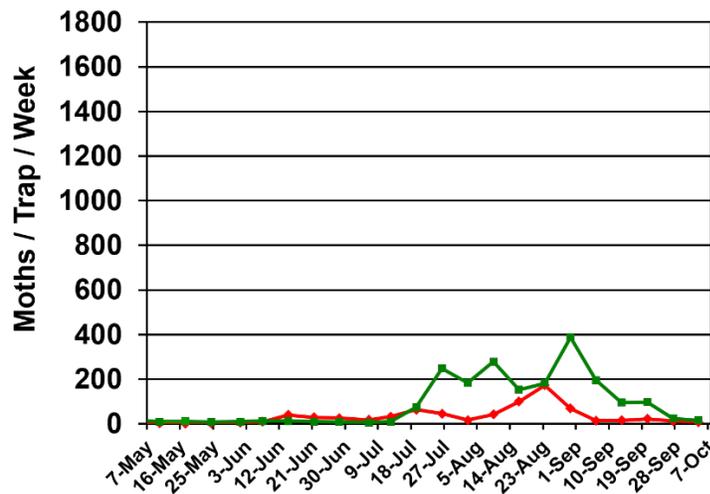
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.



Pheromone Trap Capture SC - 2022

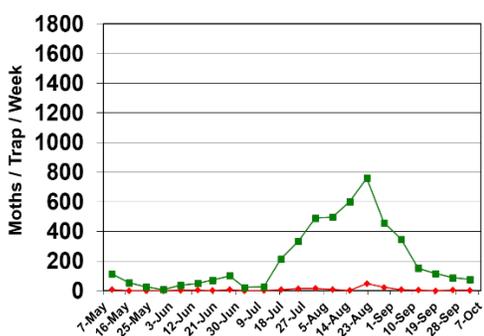


Pheromone Trap Capture SC - 2021

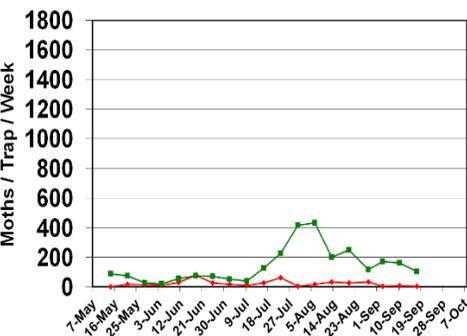


Trap data from 2007-2020 are shown below for reference to other years of trapping data from EREC:

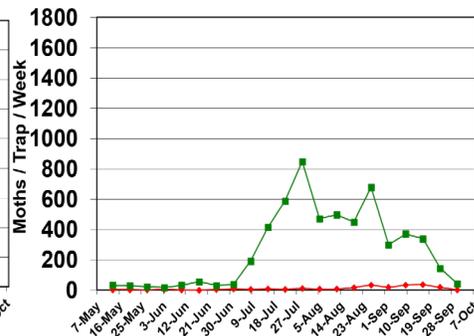
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



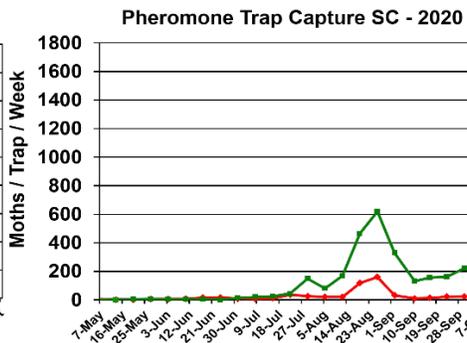
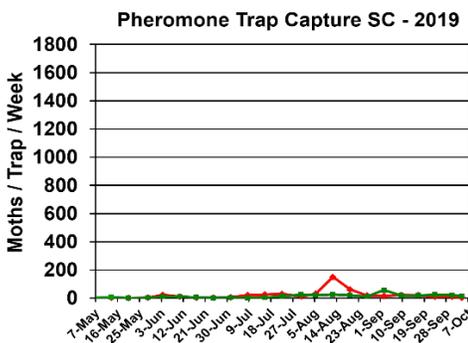
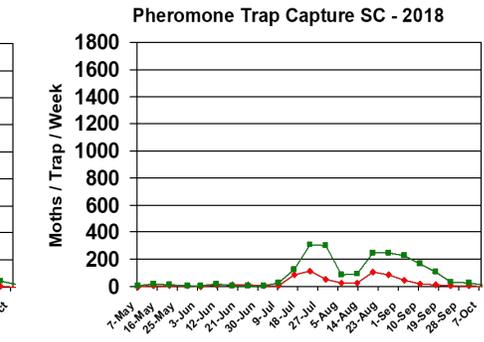
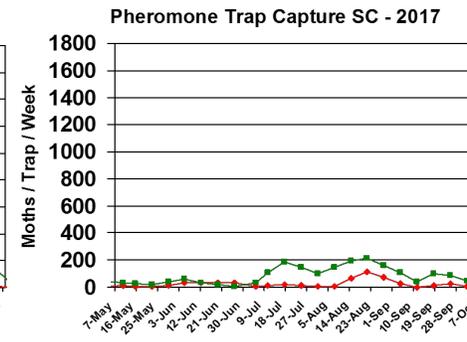
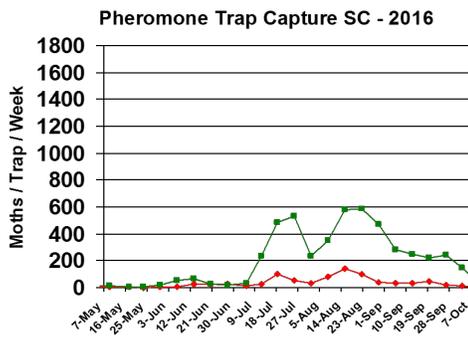
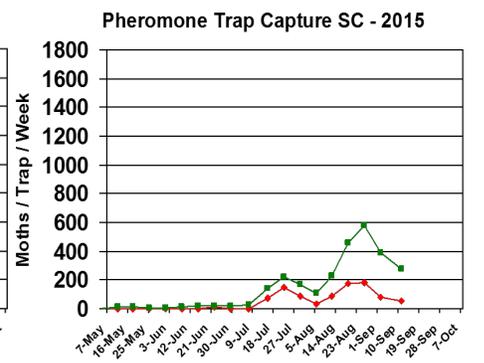
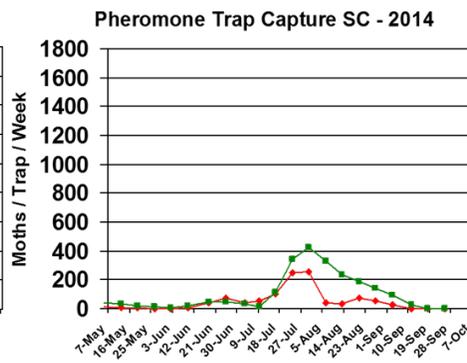
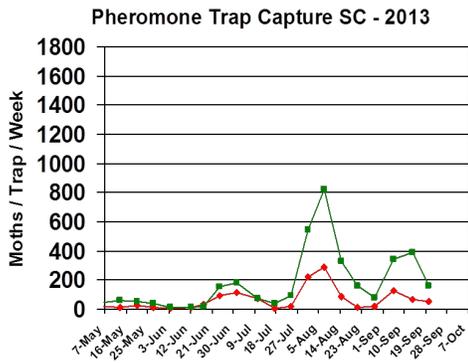
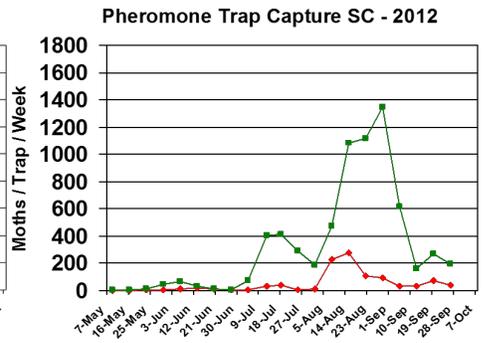
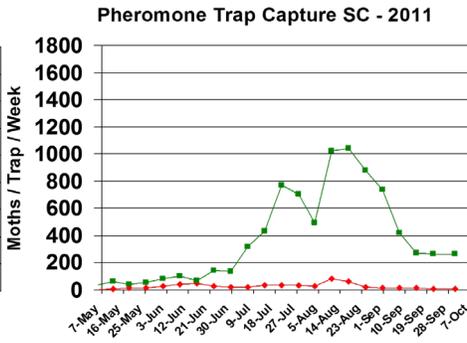
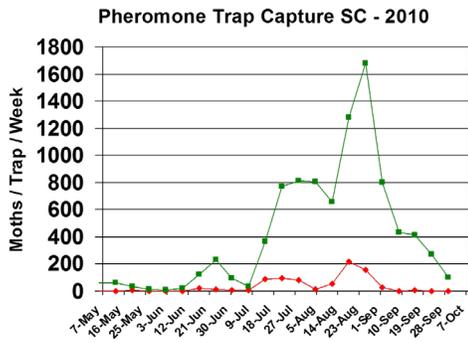
Pheromone Trap Capture SC - 2009



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Pest Management Handbook – 2022

Insect control recommendations are available online in the 2022 South Carolina Pest Management Handbook at:

<https://www.clemson.edu/extension/agronomy/pestmanagment2022/2022pmhmaster.pdf>

South Carolina Crops Blog

The SC Crops Blog contains content about production of major row crops at the following link, if you want more information: <https://blogs.clemson.edu/sccrops/>

Archived issues of the Cotton/Soybean Insect Newsletter can be viewed at a convenient link on the SCCrops page. Contact **Dr. Michael Plumblee**, if you have any questions about the blog.

Free Mobile Apps: “Calibrate My Sprayer” and “Mix My Sprayer”



Download our free mobile apps called “Calibrate My Sprayer” and “Mix My Sprayer” that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):

<http://www.clemson.edu/extension/mobile-apps/>

Need More Information?

For more Clemson University Extension information: <http://www.clemson.edu/extension/>

For historical cotton/soybean insect newsletters:

<https://www.clemson.edu/extension/agronomy/cotton1/newsletters.html>

Sincerely,

Jeremy K. Greene, Ph.D.
Professor of Entomology