



Cotton/Soybean Insect Newsletter

Volume 17, Issue #16 Edisto Research & Education Center in Blackville, SC 26 August 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](#) on Twitter.



News from Around the State

Jonathan Croft, county agent covering Orangeburg County, reported that he “saw a mix of worms in some beans this week that I recommend treatment for and had one field I recommend treating for kudzu bugs.” **Chris Talley**, county agent covering Oconee County, reported that he is “starting to see some loopers and green cloverworms moving in on soybeans, not really threshold levels yet, but looks like they’re coming. Also had one producer stating that he is seeing increased numbers of stinkbugs on soybeans.” A big ‘thanks’ to **Rogan Gibson**, a new county agent in Allendale County, for helping us collect hundreds of SBL out of a producer’s field down his way this week. We will get those checked for levels of insecticide resistance.

Upcoming Field Days

Here are some dates for upcoming field days. I will provide more detailed information as it is available.

- Fall Field Day at the Pee Dee REC – 1 September 2022
- Peanut Field Day at the Edisto REC – 8 September 2022
- Fall Field Day at the Simpson REC – 15 September 2022
- Agronomic Crop Field Day at the Edisto REC – 22 September 2022

Cotton Situation

As of 21 August 2022, the USDA NASS South Carolina Statistical Office estimated that about 91% of the crop is setting bolls, compared with 87% the previous week, 95% at this time last year, and 88% for the 5-year average. About 6% of the crop has bolls opening, compared with 2% the previous week, 2% at this time last year, and 7% for the 5-year average. The conditions of the crop were 16% excellent, 57% good, 23% fair, 3% poor, and 1% very poor. These are reported statewide averages.

The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

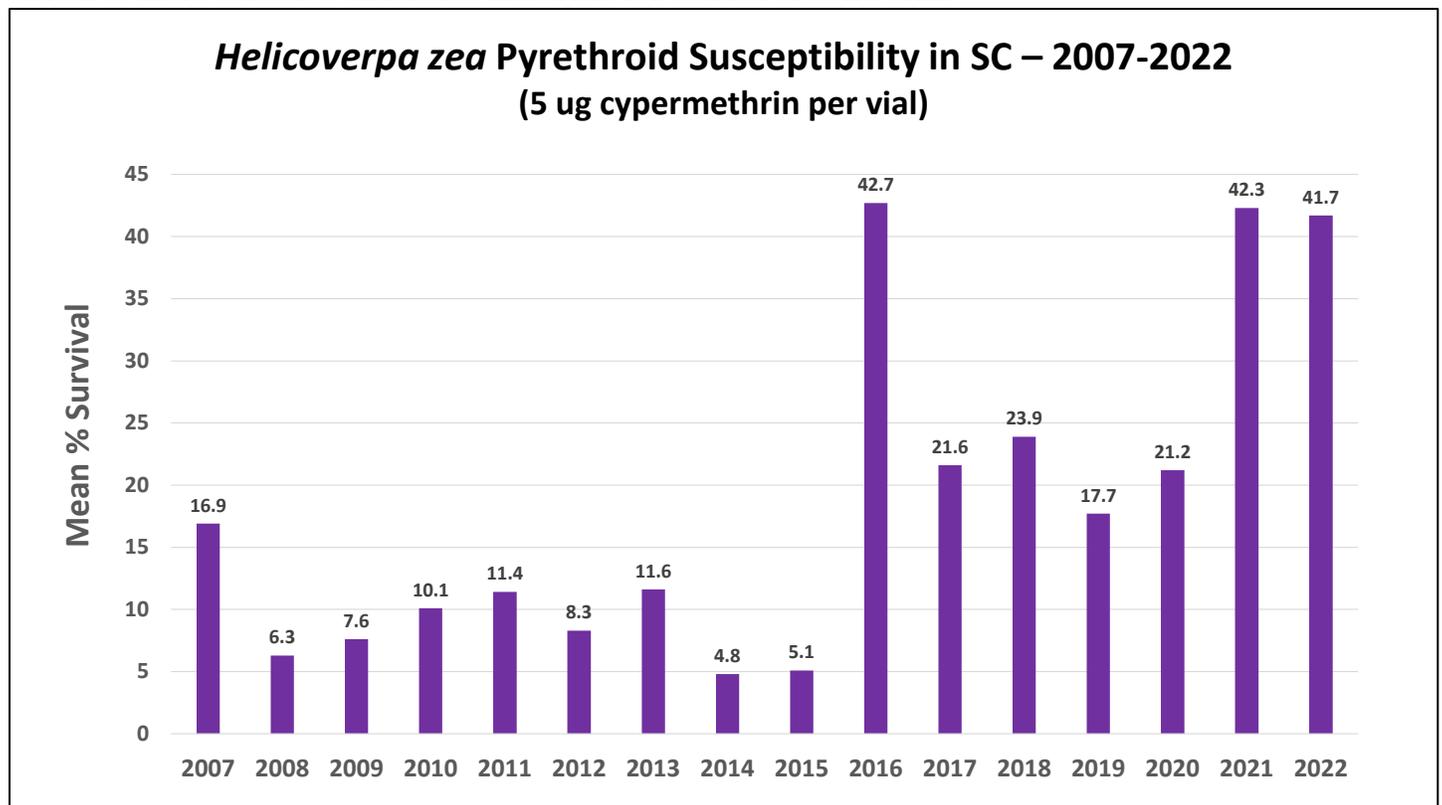
Public Service Activities

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.



Cotton Insects

Bollworm – Captures of bollworm moths in my pheromone traps increased this past week, and there are still noticeable levels of moths in the field. Females are still laying eggs on cotton. Most cotton is getting old enough and has bolls large enough to deter significant feeding injury from bollworm, but any 2-gene cotton planted late might need another check to make sure the final bolls are okay. Many of the insecticide options we have had for bollworm over the years have included pyrethroids, but we have observed reduced control of bollworm with pyrethroids for some time now. Because we widely use pyrethroids for control of stink bugs (due to long residual control of stink bugs), we need to know what pyrethroids might still be doing on bollworms that escape control with Bt technology. The chart below shows updated data from a bioassay I have run each year since 2007 on survivorship of bollworm moths after exposure to a pyrethroid at a discriminating dose. My colleagues, **Drs. Musser and Payne**, have provided the treated vials over the years, making this ongoing resistance monitoring effort possible. The data clearly show increased survival of bollworm since 2016, but we noticed “slippage” in the field years before that. The take-home message is that pyrethroids will likely provide fair-to-poor control of bollworm escaping control with Bt proteins, and this is why we have had to switch to more selective and active materials for control of bollworm.



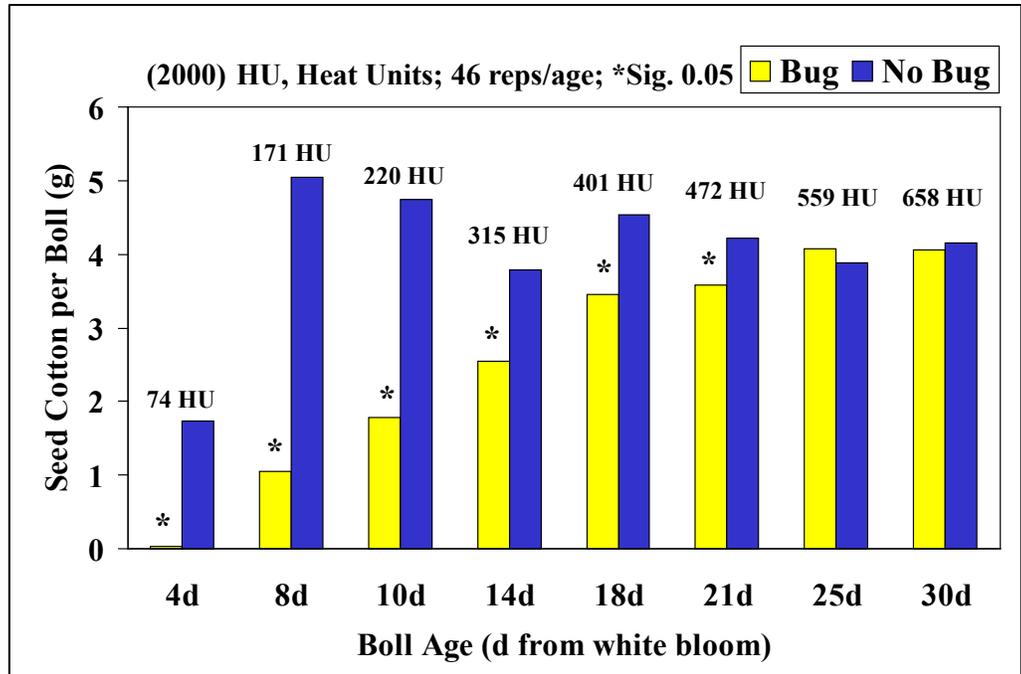
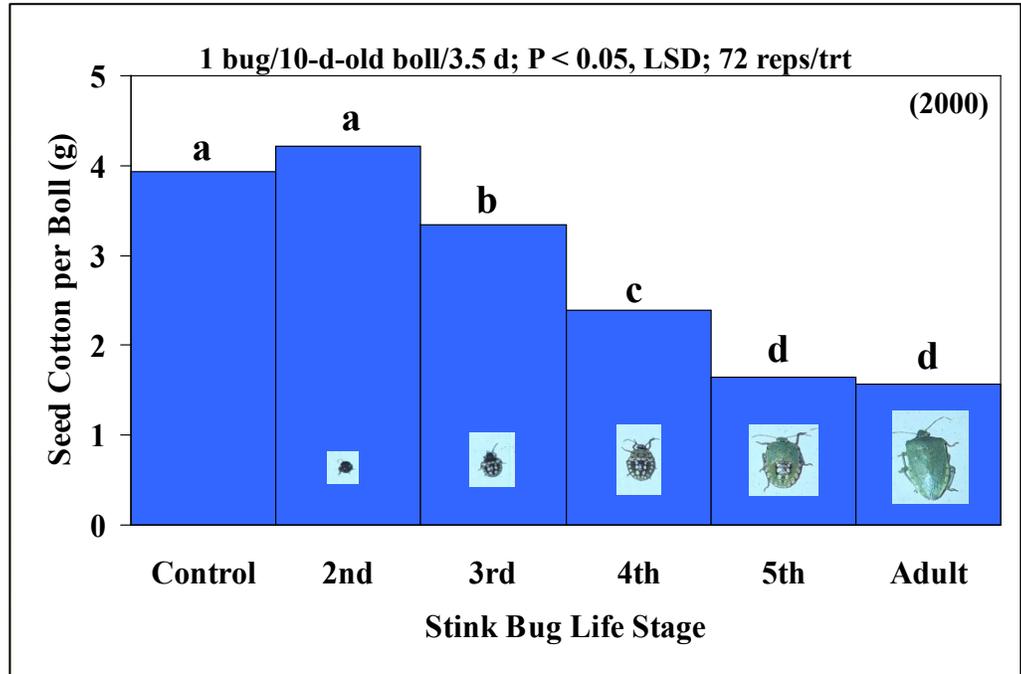
The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Public Service Activities

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.



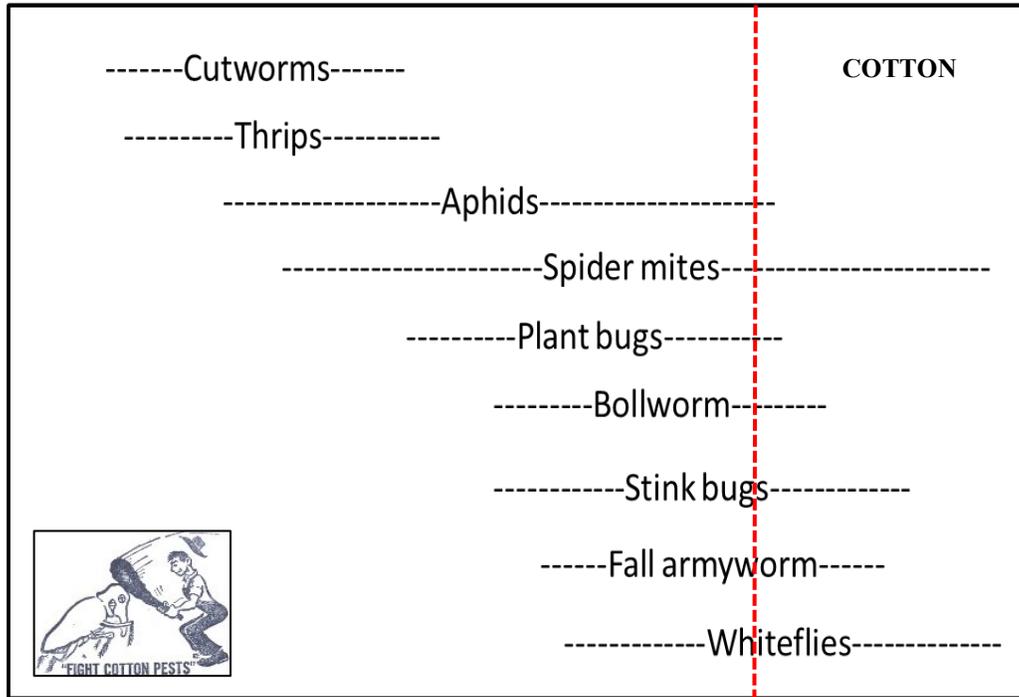
Stink bugs – It is the final week of stink bug month in South Carolina, but the #1 insect pest group of cotton in our state will continue to develop in the crop into September. Remember, immature stink bugs cannot fly from the crop...they must complete their development before they can leave. Over 20+ years ago, I did some experiments to see how injurious each stage of stink bugs were. The chart below shows that large nymphs (5th instars) of the southern green stink bug were able to cause just as much injury to bolls (10 days from flower) as adults, with an exposure time of just 3.5 days. So, fields should be checked for reproduction that has taken place since the last insecticide spray. Any nymphs will continue to feed on cotton until they complete their development or we get freezing temps, whichever comes first. And, stink bugs can injure bolls that are fairly large. In other work, I tested boll age to see when stink bugs could no longer injure bolls. That research showed that stink bugs could damage bolls that were less than 25 days from flower. I've observed the 3 major species of stink bugs this season making up the usual complex: of brown, green, and southern green stink bugs in the crop. Continue to use the dynamic boll-injury threshold to manage stink bugs and finish out the crop.



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.



April May June July August September



Soybean Situation

As of 21 August 2022, the USDA NASS South Carolina Statistical Office estimated that about 77% of the crop is blooming, compared with 71% the previous week, 83% at this time last year, and 82% for the 5-year average. About 43% of the crop is setting pods, compared with 35% the previous week, 42% at this time last year, and 42% for the 5-year average. The conditions of the crop were 12% excellent, 66% good, 18% fair, 3% poor, and 1% very poor. These are reported statewide averages.

Soybean Insects

In my area of the state, numbers of soybean looper (SBL) have dropped, with numbers of velvetbean caterpillar (VBC) picking up significantly. Also in the mix are green cloverworms (GCW), but they are unusually late to the party. We usually see GCW much earlier in the season. If you check the small caterpillars on your drop cloth, you might see that many of them crawling with a looping action are actually GCW or VBC and not SBL. Make sure you can identify the small ones! These species are migratory, so they can keep coming from southern latitudes, and we will probably see that for a few more weeks, especially in late-planted soybeans.



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Public Service Activities

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.



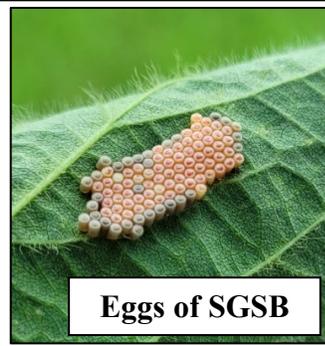
Also, stink bugs and kudzu bugs can get out of control, especially if you have not sprayed fields with a pyrethroid recently. As I mentioned last week, pyrethroids, except for anything with cyfluthrin, are very good on kudzu bugs. We saw the same species of stink bugs we have been seeing in some untreated soybeans again this week, but green stink bug (GSB) is now more noticeable. The others include redbanded stink bug (RBSB), southern green stink bug (SGSB), brown stink bug (BSB), and the brown marmorated stink bug (BMSB). Most of the pyrethroids are good on SGSB, GSB, and BMSB, but you need bifenthrin for BSB and bifenthrin plus Orthene to get good control of RBSB. Thankfully, RBSB is not that numerous in later maturity groups (MG) of soybeans (e.g. MG 6+). I see high populations of RBSB almost exclusively in earlier-maturing varieties (e.g. MG 3 or 4 soybeans). In one of my trials with MG 3.5 soybeans, RBSB is the one of the most numerous species in the field. Use our published thresholds of 1-2 bugs per sweep or 1 bug per rowft (38" rows). See the PMHB for details.



RBSB



SGSB



Eggs of SGSB



GSB

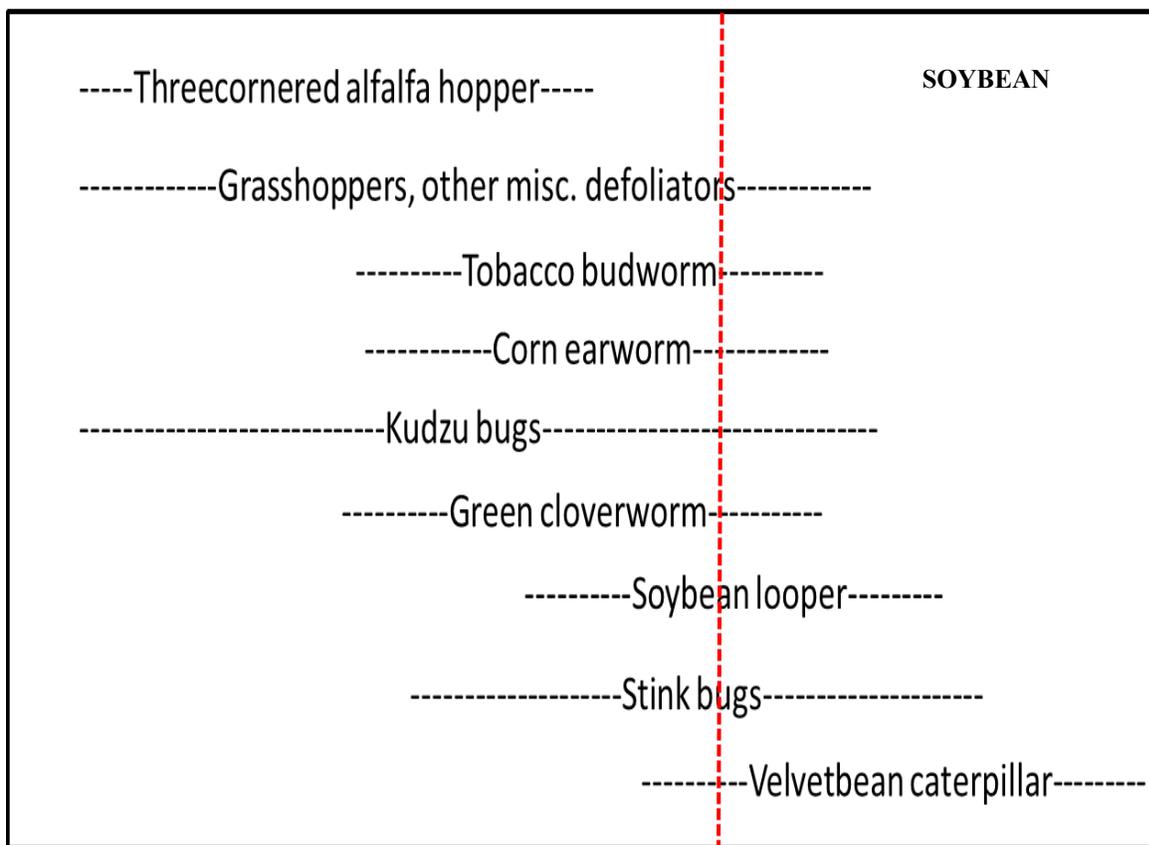


Numerous kudzu bug nymphs

The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.



April May June July August September October



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

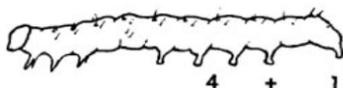
Public Service Activities

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.

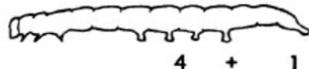


As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.

FIELD KEY TO COMMON SOYBEAN CATERpillARS



CORN EARWORM
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



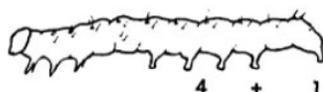
VELVETBEAN CATERPILLAR
4 + 1 pair prolegs
Very active when handled



SOYBEAN LOOPER
2 + 1 pair prolegs
Fatter at tail end
Looping movement



GREEN CLOVERWORM
3 + 1 pair prolegs
Not fatter at tail end
Looping movement



TOBACCO BUDWORM
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Public Service Activities

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.



Bollworm & Tobacco Budworm

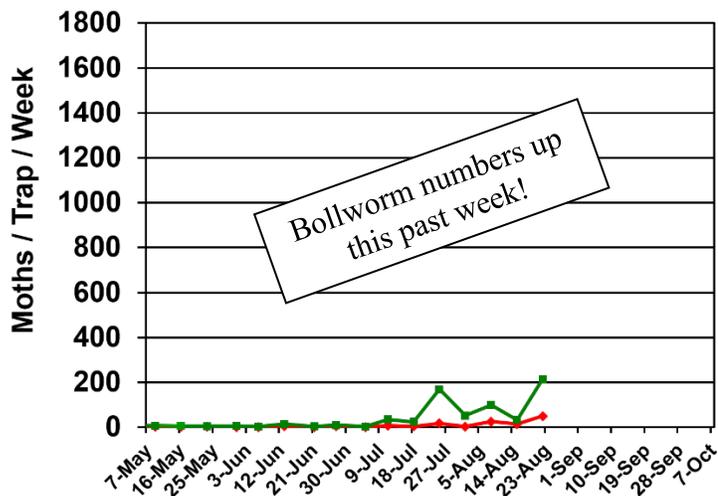


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2021 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

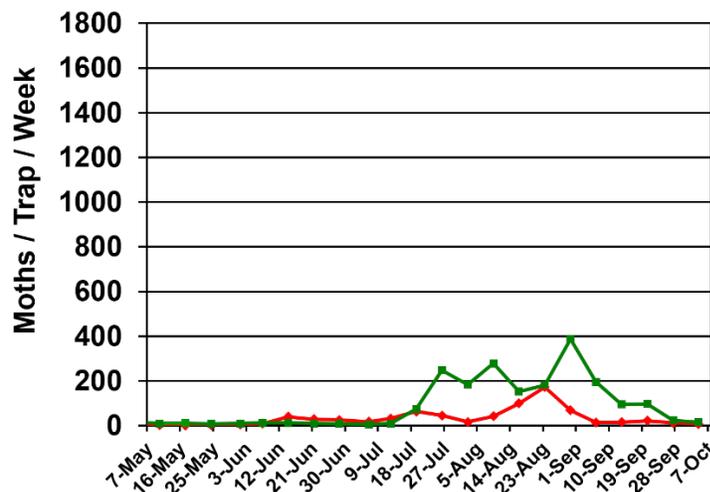
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.



Pheromone Trap Capture SC - 2022

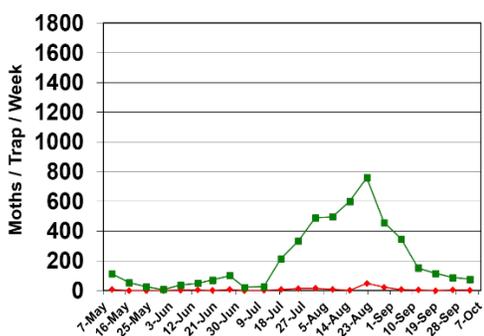


Pheromone Trap Capture SC - 2021

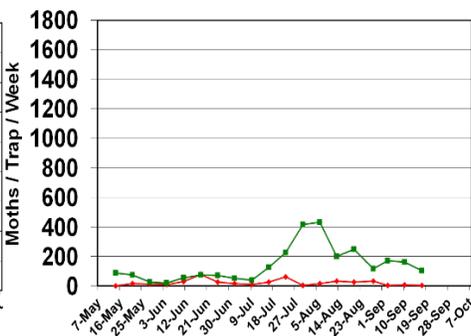


Trap data from 2007-2020 are shown below for reference to other years of trapping data from EREC:

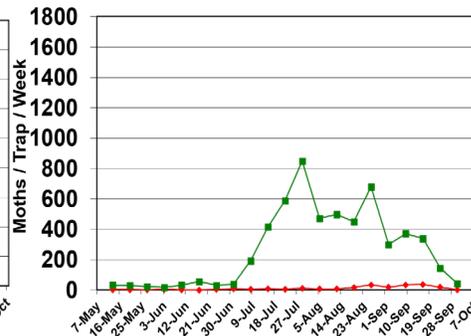
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



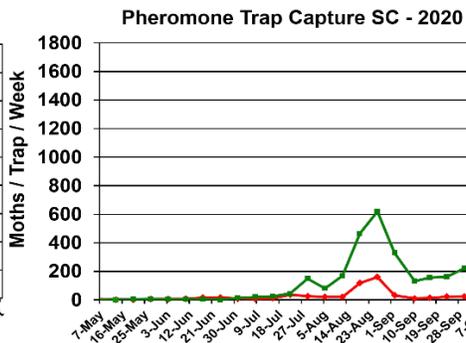
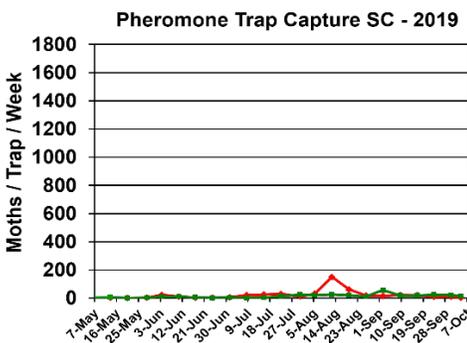
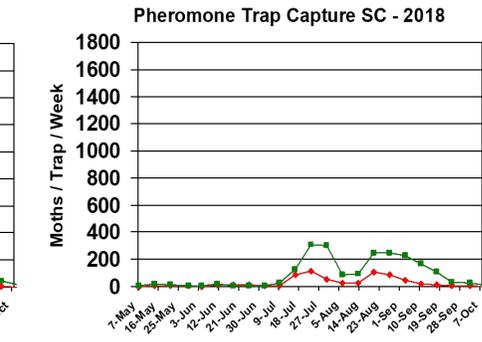
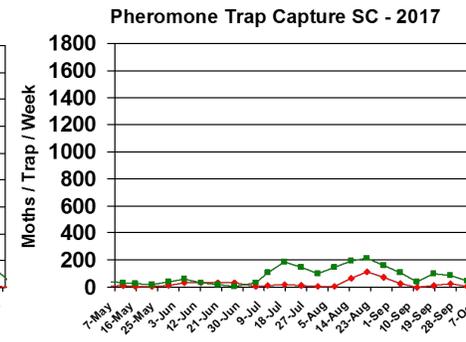
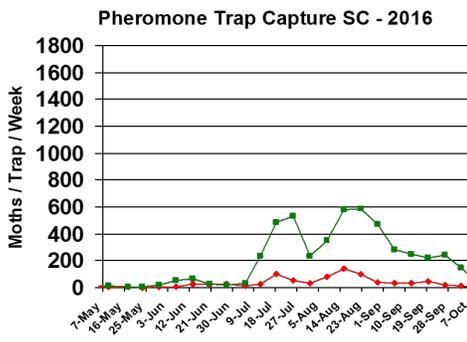
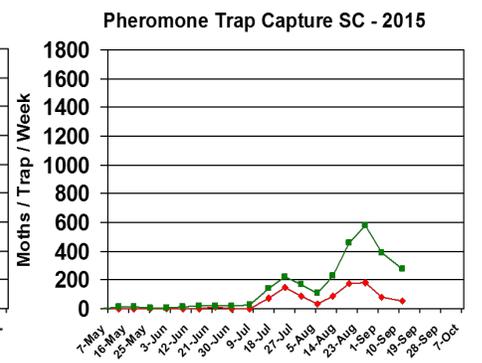
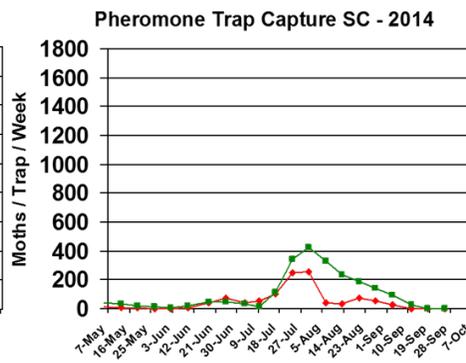
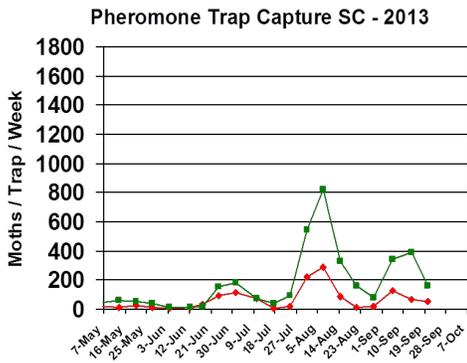
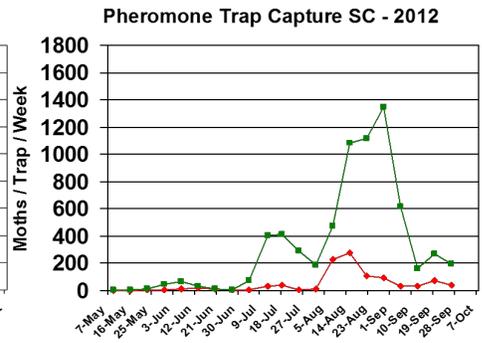
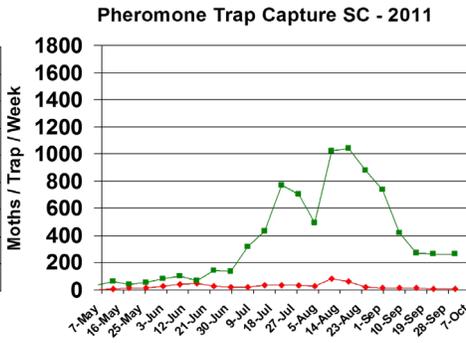
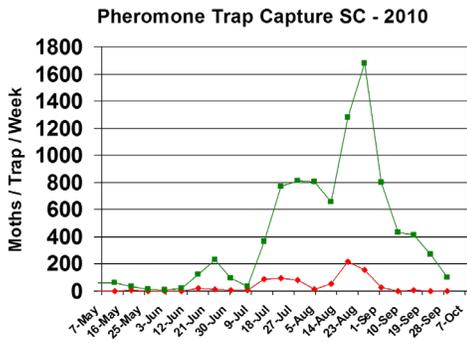
Pheromone Trap Capture SC - 2009



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Public Service Activities

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.



The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.

Public Service Activities

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.



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