



Cotton/Soybean Insect Newsletter

Volume 18, Issue #15 Edisto Research & Education Center in Blackville, SC

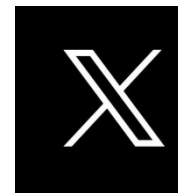
17 August 2023

Pest Patrol Alerts *(new instructions below, if you have stopped receiving text alerts)*

Some of the information contained herein each issue is available via text alerts that direct users to online audio 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. Subscribers can just click on the link in the text to hear the update. Users can subscribe for text message alerts for my updates by signing up online at <https://www.syngenta-us.com/pest-patrol> by scrolling down on this landing page, entering your information, and including your mobile number. Select 'South Carolina' from the list, and you can sign up for multiple states at the same time. Pest Patrol Alerts are sponsored by Syngenta. Thank you!

Updates on Twitter

When noteworthy events happen in the field, I will be sending them out quickly via X (formerly Twitter). If you want to follow those quick updates, follow me at [@BugDocsIn](#) on X (I liked the Twitter name better).



News from Around the State

Jonathan Croft, county agent covering Orangeburg, Dorchester, and Berkeley Counties, reported "No big news out of my area. There are some growers spraying for stink bugs in cotton this week. I have not checked many beans this week, but the ones I have were below threshold for worms." **Kyle Smith**, county agent covering Darlington, Marlboro, Dillon, and Florence Counties, reported "I have seen some stink bugs and stink bug damage in cotton (photo from Kyle at right). Had one grower go ahead and spray his fields for stink bugs. Most of everything I've seen has been below threshold to spray. Soybeans are looking good, starting to see all types of worms (VBC, loopers, podworms) and a few stink bugs but nothing at threshold levels."



Upcoming Field Days

Our annual fall field days are almost here. Stay tuned for more details on the topics that will be covered. There will be pesticide and CCA credits offered, and most field days include lunch also!

- 31 August – Field Day at Pee Dee REC in Florence, SC
- 7 September – Peanut Field Day at Edisto REC in Blackville, SC
- 14 September – Piedmont Field Day at the Simpson Station
- 21 September – Row-Crop Field Day (cotton, soybeans, etc.) **and** Vegetable/Fruit Field Day (sweet potatoes, pumpkins, tomatoes, watermelons) at Edisto REC in Blackville, SC



Cotton Situation

As of 13 August 2023, the USDA NASS South Carolina Statistical Office estimated that about 99% of the crop is squaring, compared with 96% the previous week, 99% at this time last year, and 96% for the 5-year average. About 83% of the crop is setting bolls, compared with 70% the previous week, 86% at this time last year, and 82% for the 5-year average. About 3% of the crop has bolls opening, compared with 1% the previous week, 2% at this time last year, and 1% for the 5-year average. The conditions of the crop were reported as 4% excellent, 54% good, 37% fair, 5% poor, and 0% very poor. These are reported statewide averages.

Cotton Insects

Bollworm – Captures of bollworm moths in our pheromone traps ticked down a little this past week. In our weekly checks of bollworm escaping Bt control in my plots, we are finding low levels of damage from bollworm. Boll damage has hit 14, 2, and 0% in the non-Bt, 2-gene, and 3-gene Bt cotton, respectively. This is low for us. When we do find injury in Bt cotton, it is concentrated at the tip of the boll under the dried bloom tag. There is where most are getting into bolls. Again this week, our bioassay data continue to show decreased efficacy with pyrethroids on the species (50% survival), so, if you need to treat 2-gene Bt cotton for bollworm, consult the non-pyrethroid section or the multiple pests section of the 2023 Pest Management Handbook for up-to-date recommendations. The 3-gene Bt cotton I looked at again this week was clean, with no larvae or damage observed.



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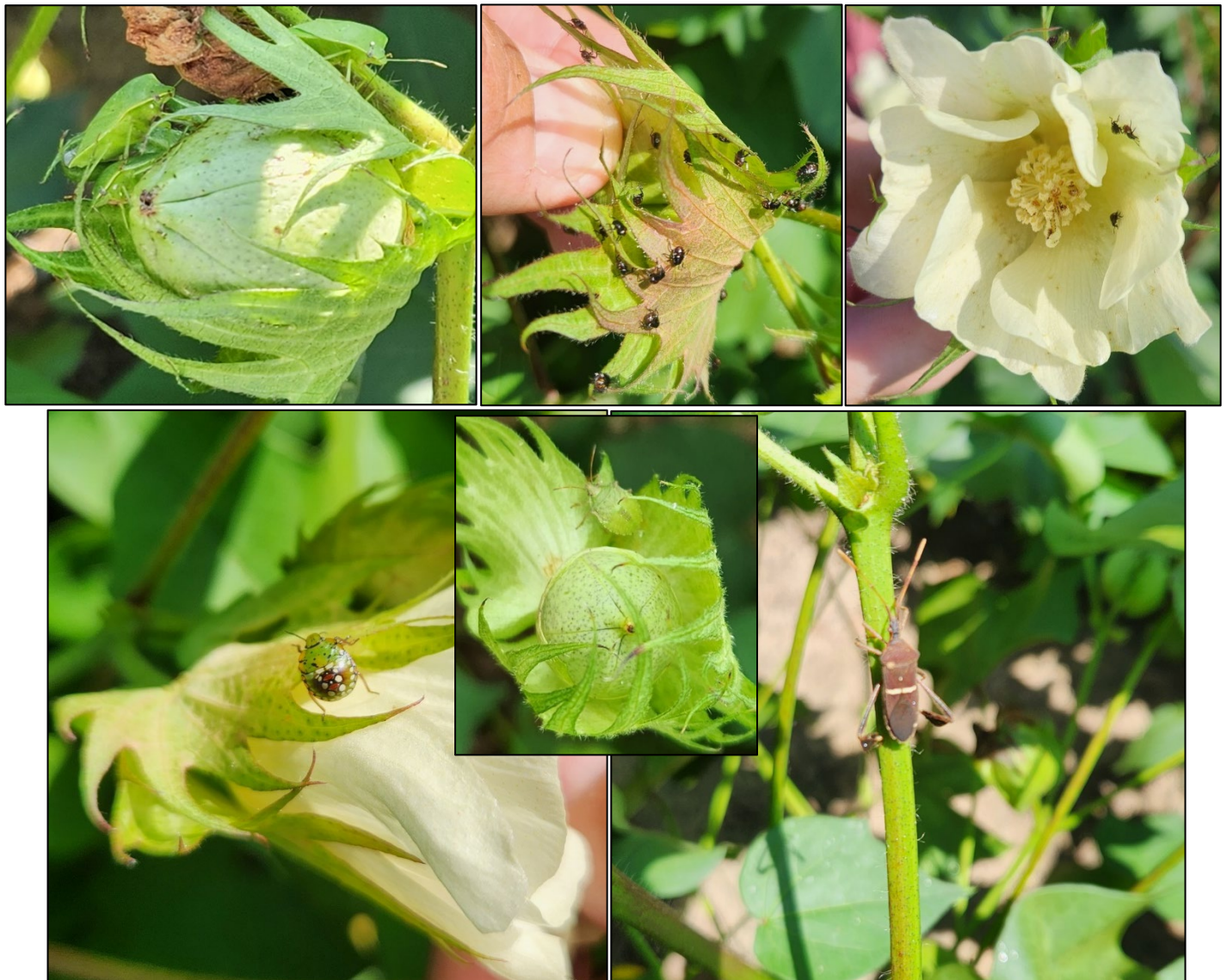
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Spider Mites – Populations of spider mites are still present and an issue in some locations. They have been reported in peanuts also. As long as we continue to get rain, that should keep them knocked back. A hard rain is the best “product” for spider mites. If you do need to treat for spider mites, there are some good miticides, but they can be expensive.

Plant Bugs – At this point (after the 2nd/3rd week of bloom), just lump plant bugs in with stink bugs, and use the dynamic boll-injury thresholds. Insecticides used for stink bugs will very likely suppress or kill plant bugs, so manage stink bugs, and you will control any leftover plant bugs.

Stink Bugs – Activity from the stink bug complex picked up tremendously this past week. Reproducing adults (a threesome on the boll below) have eggs hatching, and damage to bolls is up. I saw nymphs on squares, blooms, and bolls this week. Even the leaffooted bugs are getting in the mix.






Continue to use the dynamic boll-injury threshold by week of bloom to manage the complex, and you should be in good shape. The decision cards we made years ago (shown here) summarize how to use the threshold.


Decision aid for stink bug thresholds in Southeast cotton

- 1 Pull random sample of quarter size diameter bolls, avoid field edges. (boll sizes between 0.9" and 1.1")
- 2 1 boll / acre, no less than 25 / field.
- 3 Sort bolls into two piles: those with and those without, obvious external lesions.
- 4 Crack and inspect bolls with external lesions for internal damage (boll wall warts, stained seed or lint).
- 5 If threshold is not met for that week, (see chart) check the remaining bolls for internal damage.
- 6 Treat field only if the threshold is met for that week.



0.9"

Bolls should fit through the large hole but not the small one.




1.1"

Week of bloom	Threshold (% internal boll damage)
1	50%
2	30%
3	10%
4	10%*
5	10%*
6	20%
7	30%
8	50%


*Consult state guidelines for scouting intervals.


Decision aid for stink bug thresholds in Southeast cotton

Stained seed and lint




Boll wall warts







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External lesions



Boll diameter should be between 0.9" and 1.1"

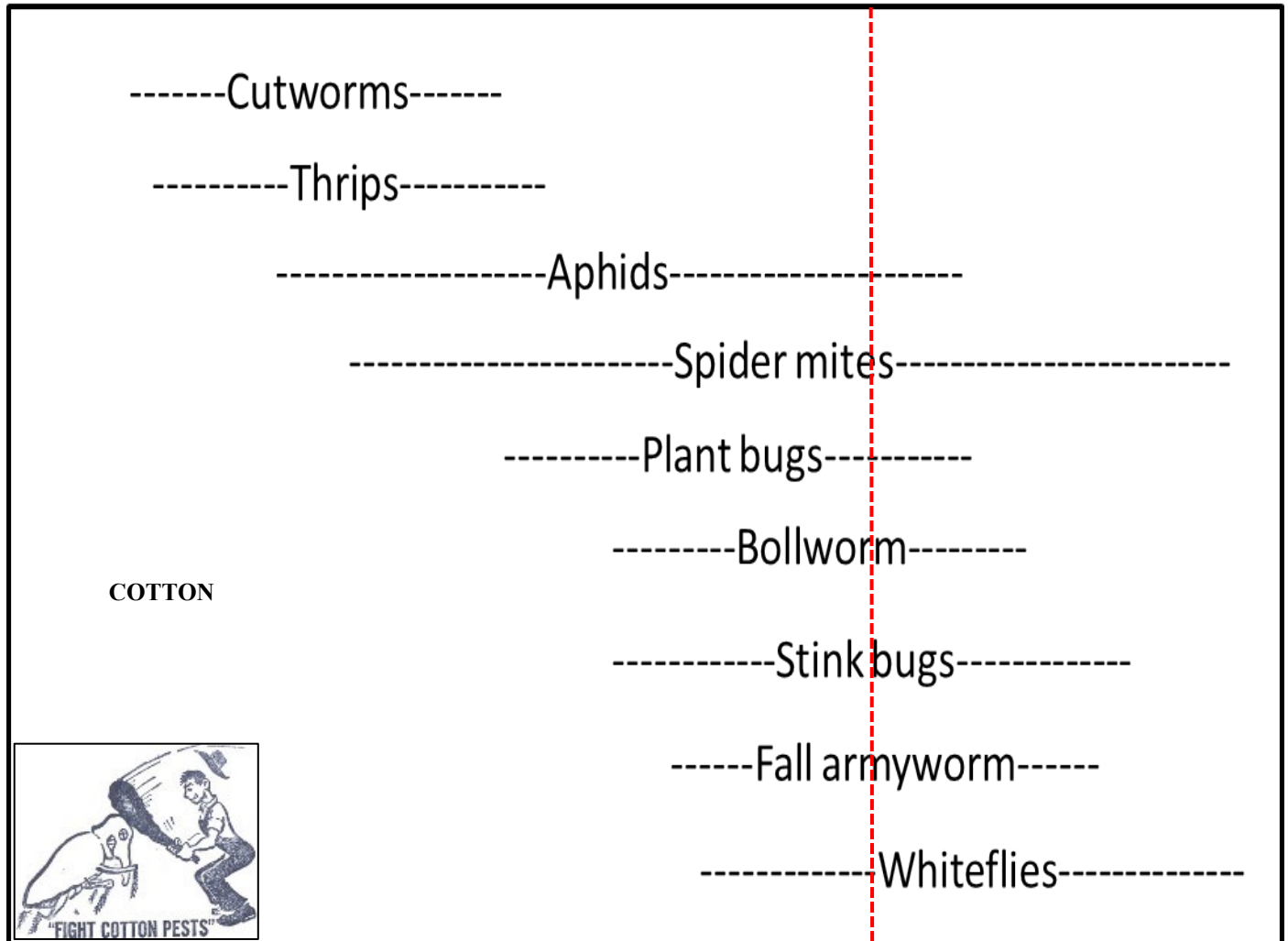


Quarter size boll





April May June July August September



Soybean Situation

As of 13 August 2023, the USDA NASS South Carolina Statistical Office estimated that about 73% of the crop is blooming, compared with 60% the previous week, 69% at this time last year, and 67% for the 5-year average. About 39% of the crop is setting pods, compared with 30% the previous week, 34% at this time last year, and 29% for the 5-year average. The conditions of the crop were reported as 3% excellent, 51% good, 32% fair, 8% poor, and 6% very poor. These are reported statewide averages.

Soybean Insects

Again this week, more insect activity is showing in soybeans. We observed green cloverworm, soybean looper, and velvetbean caterpillar today, but numbers are not yet at threshold. Defoliation is picking up, but my plots have not been hit yet. Most reports from around the state seem to be similar. Those migratory species will be here...it is just a matter of time. We have been putting in a large amount of time on a project



simulating defoliation from these defoliators, and we expect to refine our thresholds with the data. Here is another photo of a 2-row plot that we 100% hand defoliated at R2 this week. Think this will result in a yield loss? It is surprising how fast the leaves come back, but this treatment will very likely sustain a loss. We have intermediate treatments also, ranging from 0-100%. This work by PhD student Adam Whitfield has much promise. Thanks to the SC Soybean Board and our growers for funding the project!

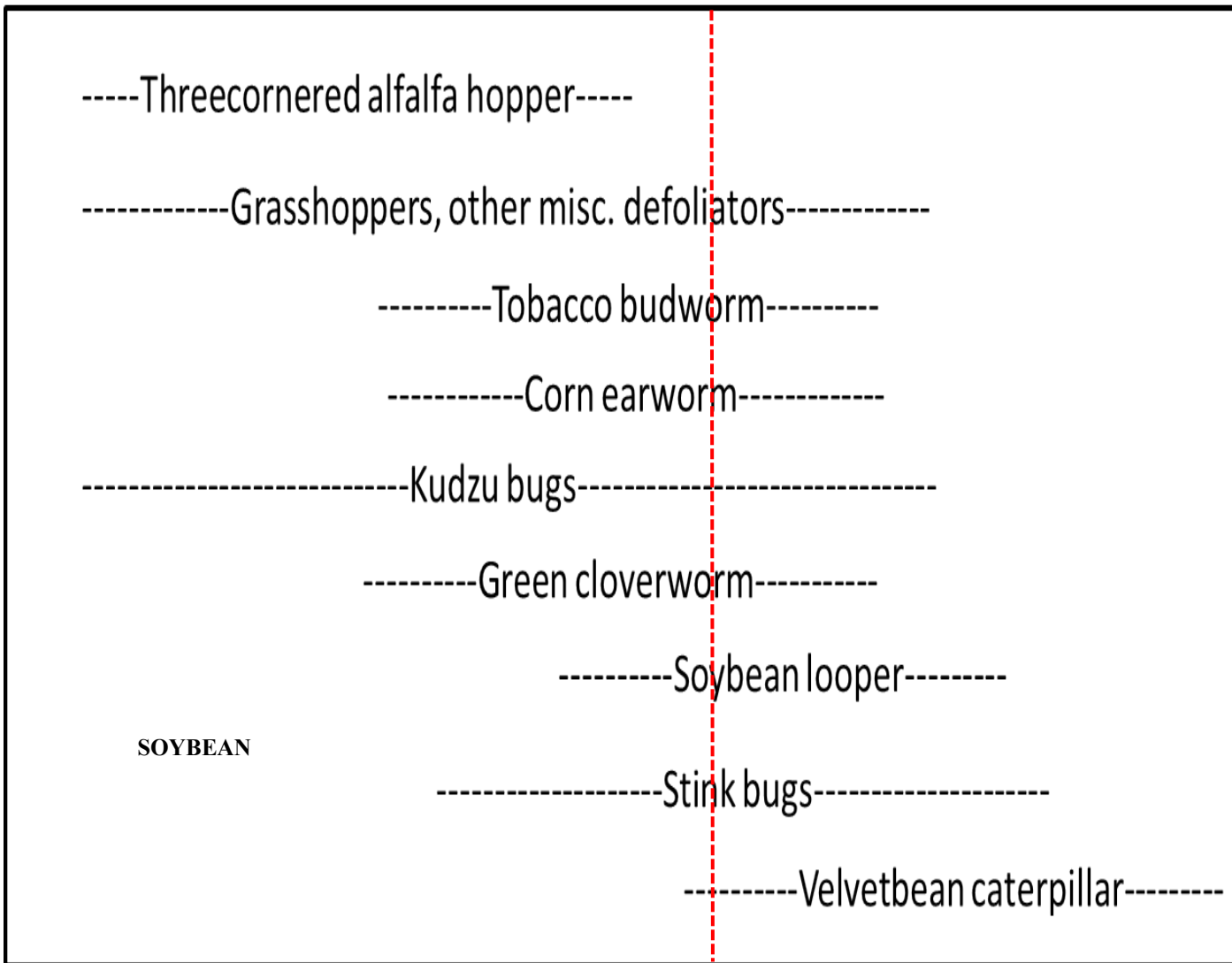


I also saw low levels of kudzu bugs and other pests, but stink bugs are starting to show up in soybeans in large numbers. Eggs are being deposited, and the various species will be attempting to colonize fields for the rest of the season. I saw these eggs this week. They are from the green stink bug...my best guess.





April May June July August September October



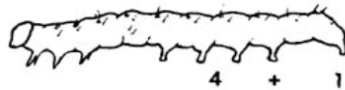


As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.

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(2017) Prepared by Jeremy Greene, Professor of Entomology

FIELD KEY TO COMMON SOYBEAN CATERpillARS



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



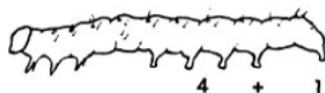
VELVETBEAN CATERPILLAR
4 + 1 pair prolegs
Very active when handled



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



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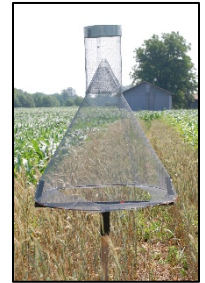


Bollworm & Tobacco Budworm

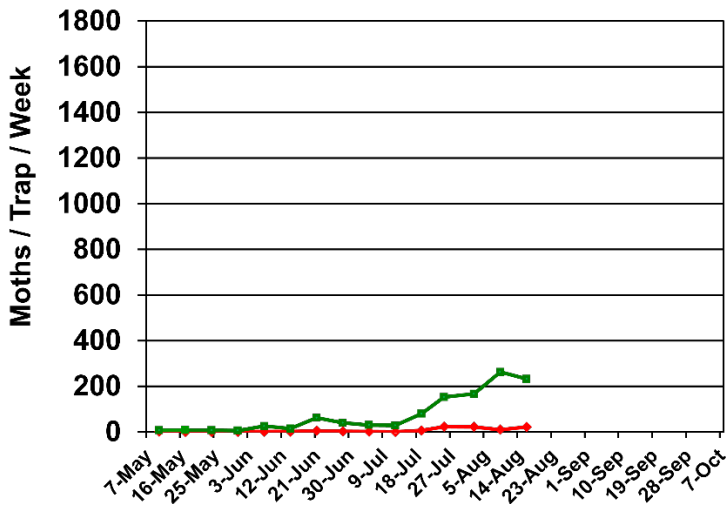


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2022 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

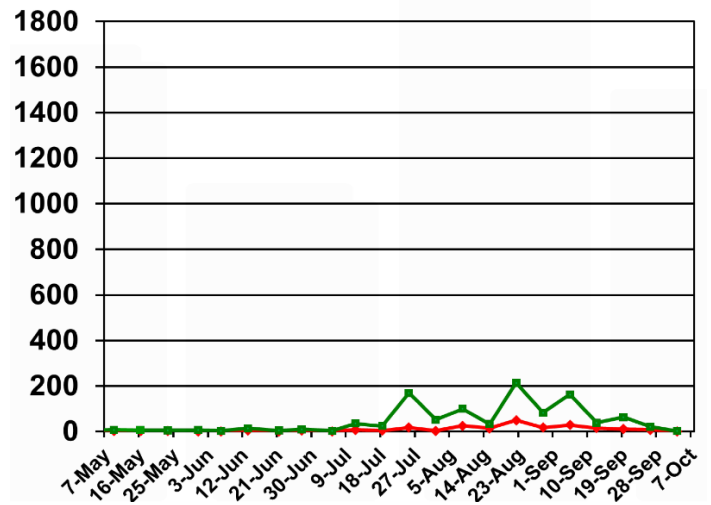
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.



Pheromone Trap Capture SC - 2023

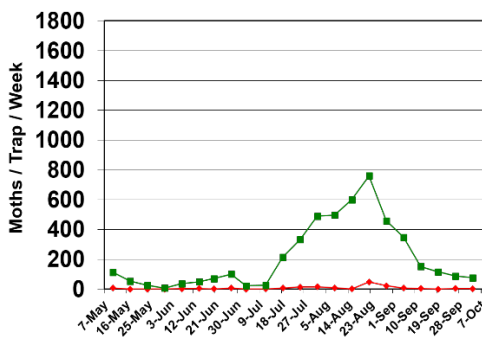


Pheromone Trap Capture SC - 2022

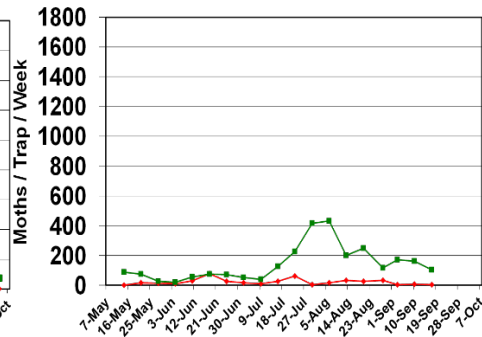


Trap data from 2007-2021 are shown below for reference to other years of trapping data from EREC:

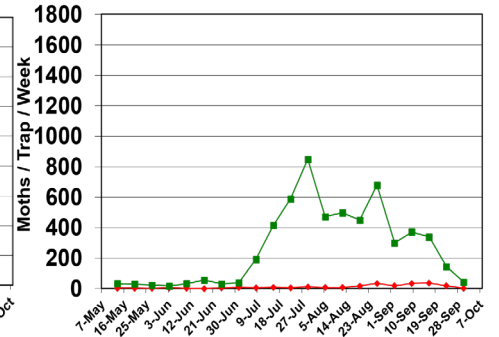
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



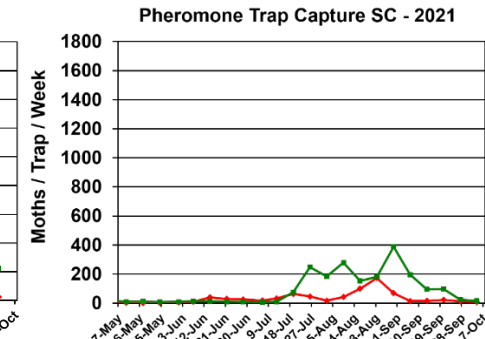
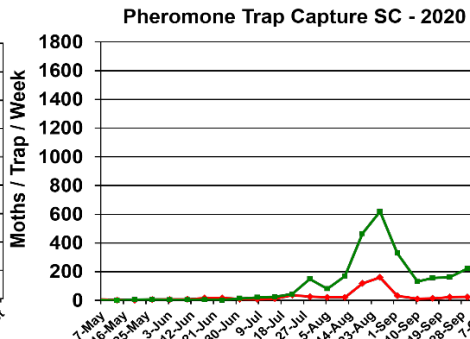
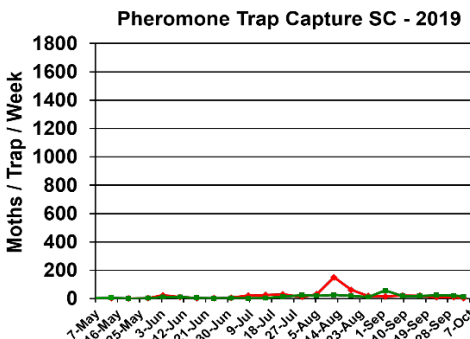
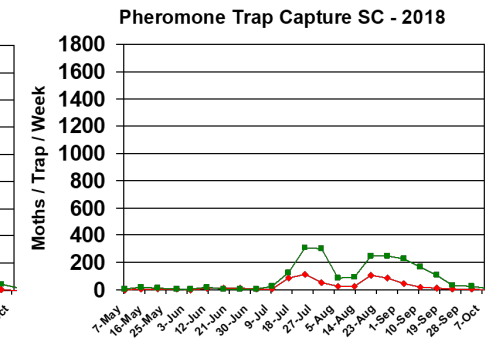
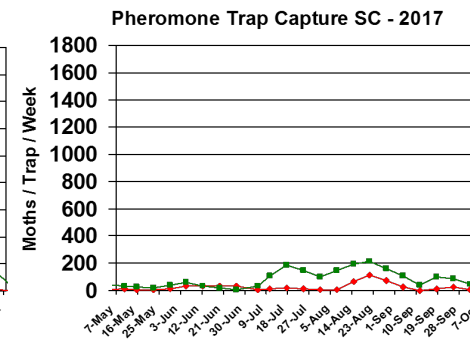
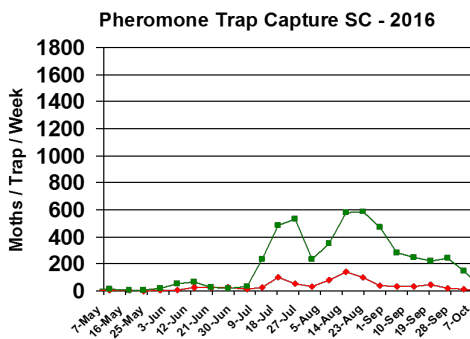
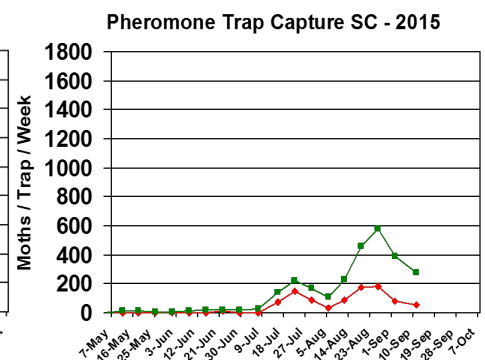
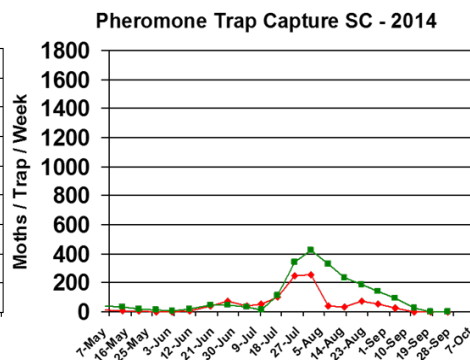
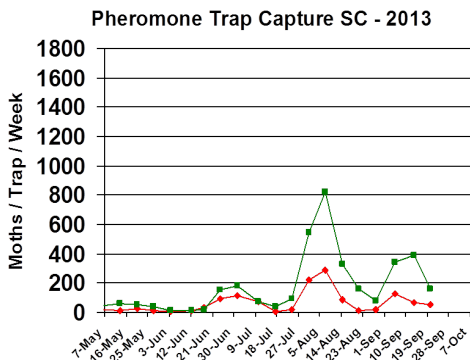
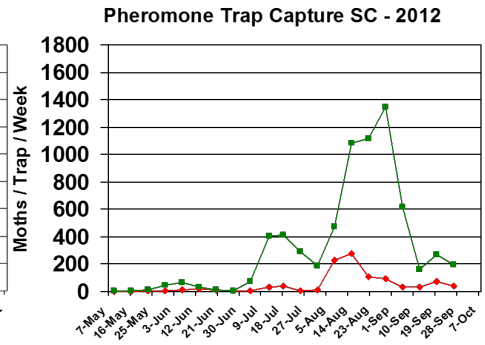
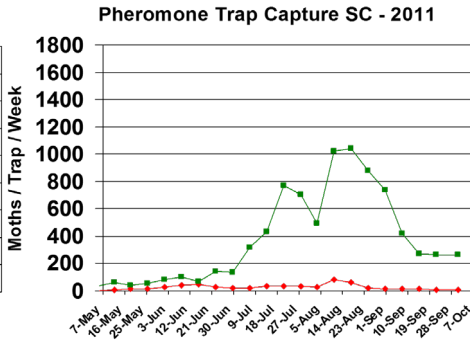
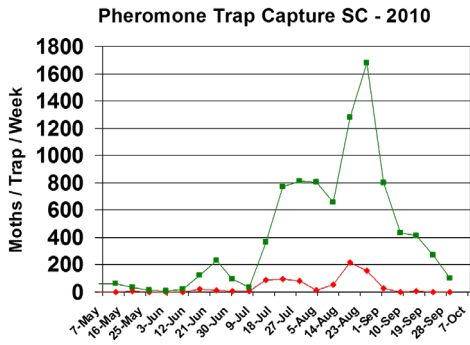
Pheromone Trap Capture SC - 2009





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Pest Management Handbook – 2023

Insect control recommendations are available online in the 2023 South Carolina Pest Management Handbook at:

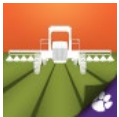
<https://www.clemson.edu/extension/agronomy/files/pest-management-handbook-clemson-extension.pdf>

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):

<https://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



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