



Cotton/Soybean Insect Newsletter

Volume 18, Issue #11 Edisto Research & Education Center in Blackville, SC

13 July 2023

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. Alternatively, you can sign up online at <https://www.syngenta-us.com/pest-patrol/south-carolina>

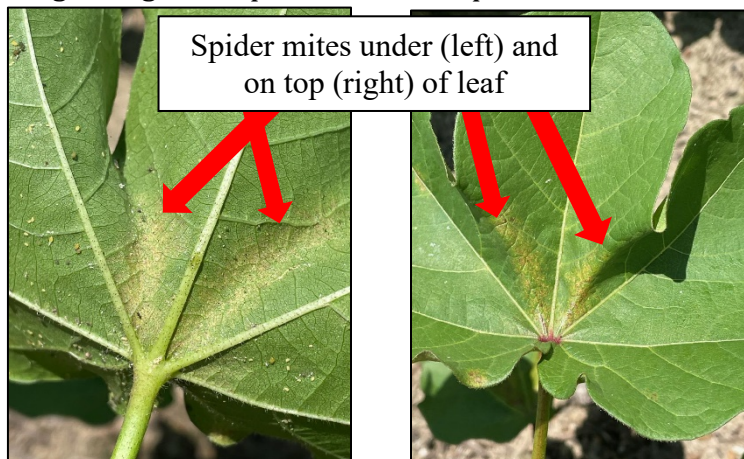
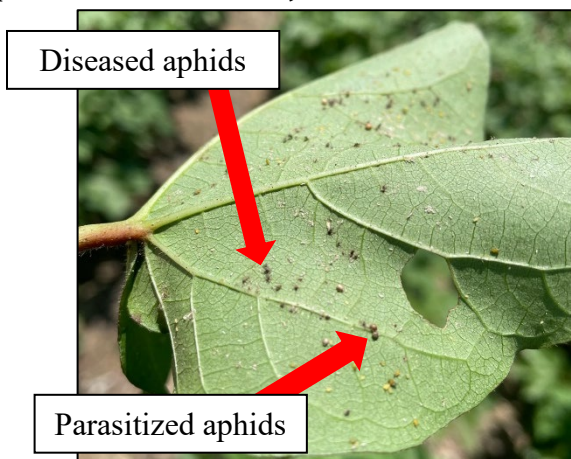
Updates on Twitter

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 **@BugDoctIn** on Twitter.



News from Around the State

Charles Davis, county agent in Calhoun County, reported that his “morning [yesterday] sweeps yielded a few TPBs but way below the threshold. Aphids are still everywhere. Beneficials seemed to be happy. I picked up some big-eyed bugs, spiders, and a lot of fire ants feeding on [and tending to] aphids. I didn’t see many lady beetles. Square retention in the fields I was in looked good. I spotted a couple of eggs in the upper canopy. Cotton is moving fast now and may need some PGRs in some fields soon.” **Will Duffie**, representative with Bayer in eastern Georgia, just across the state line in Waynesboro, sent in some photos of what he is seeing in his area. He is seeing bollworm moths, parasitized and diseased aphids, and spider mites in cotton, just to name a few items regarding arthropods. We can expect to see the same soon.





Insect Scouting Workshops for 2023 (NEXT WEEK - RSVP!)

We will offer several insect scouting workshops for cotton and soybeans in various locations across the state. We will have a morning program in the field scouting for and talking about important insects in the two crops, and two of the trainings will feature afternoon sessions covering peanuts and weeds. See below and the attached flyers for details. We have the following dates and locations planned:

- Pee Dee Region of the state – 18 July (**TUES**) at the SC Cotton Museum in Bishopville, SC (insect scouting workshop only in the AM, ending with lunch)
- Barnwell County area – 19 July (**WED**) at the Edisto REC near Blackville, SC (insect scouting in the AM and weed identification and herbicide injury in the PM).
- Calhoun or Orangeburg County area – 20 July (**THURS**) at Lone Star Plantation in St. Matthews, SC (insect scouting in the AM with PM session covering peanuts)



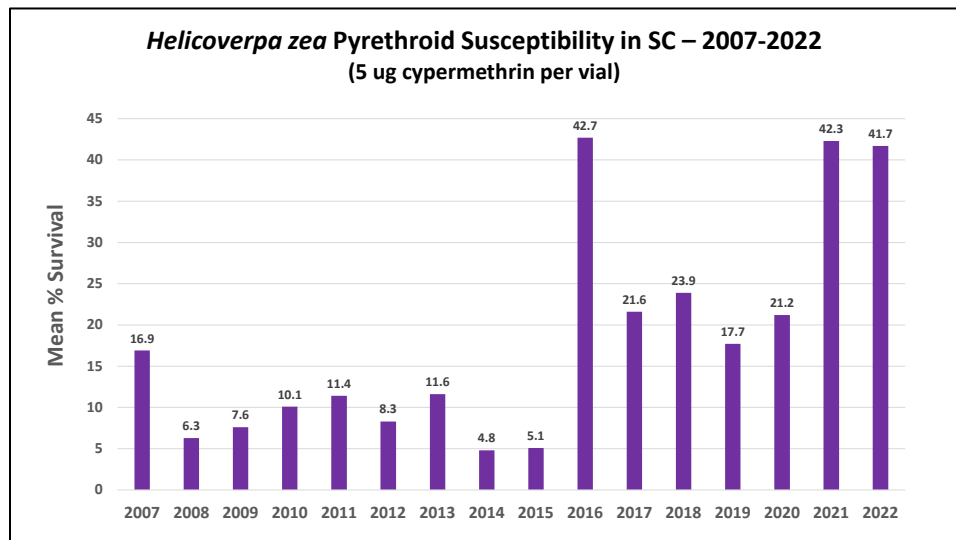
Cotton Situation

As of 9 July 2023, the USDA NASS South Carolina Statistical Office estimated that about 42% of the crop is squaring, compared with 27% the previous week, 66% at this time last year, and 58% for the 5-year average. About 7% of the crop is setting bolls, compared with NA% the previous week, 26% at this time last year, and 16% for the 5-year average. The conditions of the crop were reported as 2% excellent, 60% good, 36% fair, 2% poor, and 0% very poor. These are reported statewide averages.

Cotton Insects

Bollworm – Although numbers from our pheromone traps are still low this past week, we are seeing some moth activity in the field. Adults and freshly deposited eggs can be seen in the morning. We will likely see numbers increase in traps next week, as pupating corn earworms emerge from corn ground as bollworm moths. Again, most 3-gene Bt cotton will be unaffected by bollworm, but some of the remaining 2-gene cotton (e.g. DP1646 and other 2-gene Bt varieties) might still need supplemental sprays for bollworm. I

wanted to show the data chart here again this week. Don't expect good control of bollworm with pyrethroid sprays, as our bioassay data from 2022 indicate decreasing efficacy on the species. **Two runs of moths through vials last and this week showed 33 and 53% moth survival, respectively, in the bioassay.** My colleague in Georgia, Dr. Phillip Roberts, told me that **more than half of the moths he ran recently survived.** So, we could be seeing the end of pyrethroid control of bollworm.





Aphids – Cotton aphids continue to hang around. I took this photo yesterday morning of typical infestation levels we keep observing. The “aphid fungus” *Neozygites fresenii* is showing up in Georgia, so we will see it soon, hopefully. This fungal entomopathogen used to show up regularly and earlier than now, but it has become less predictable over the years. However, it almost always appears and exerts powerful control of cotton aphid. Often, it shows up immediately after growers have had enough and sprayed, resulting in wasted money on killing aphids that were going to die and disappear anyway. So, unless you are convinced they are hurting yields (not likely), or you need to get them out of the way so you can see other pests while scouting, don’t spray aphids. I can find reason in spraying because you cannot run a sweep net to check for plant bugs because there are too many aphids.



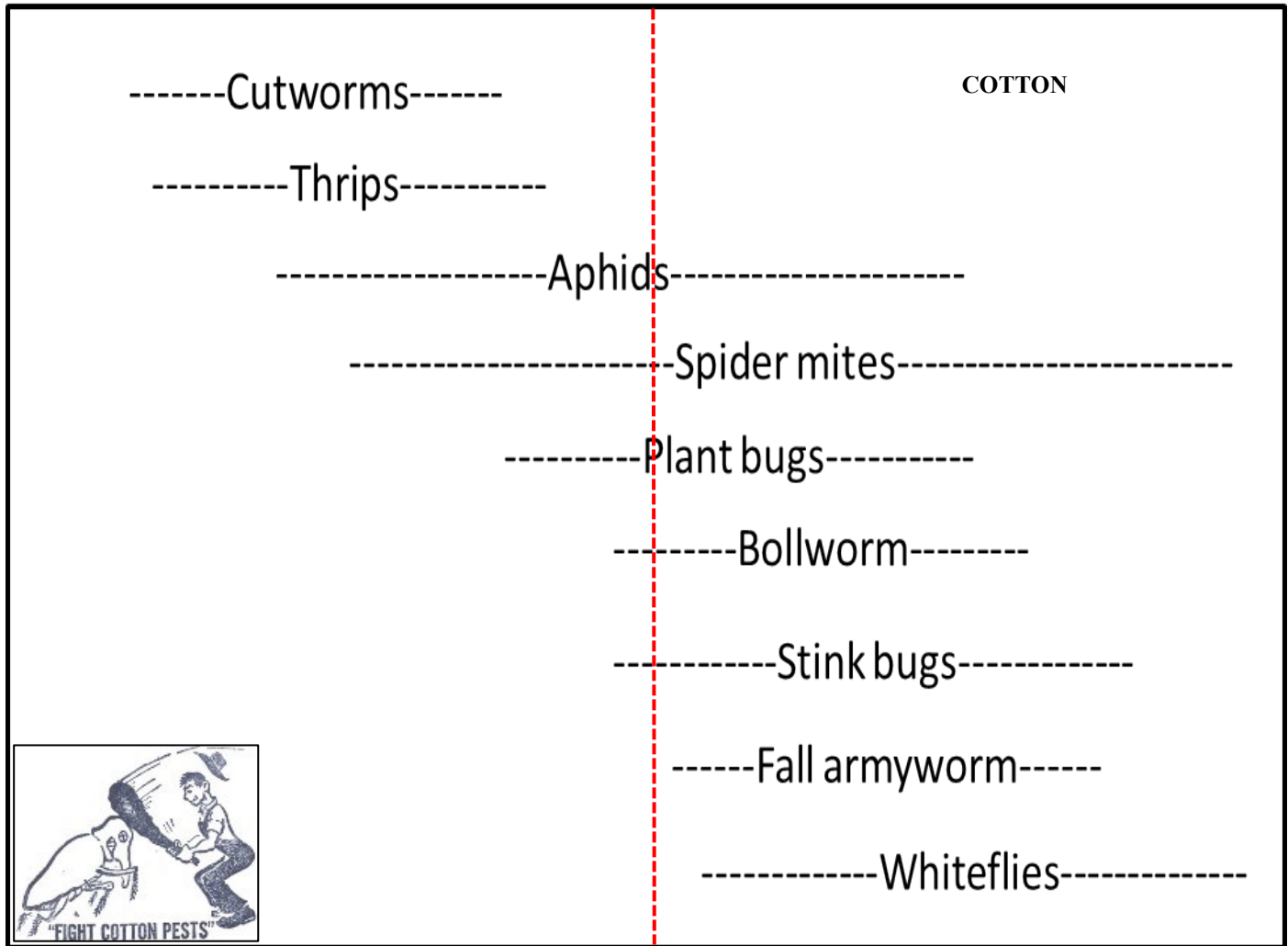
Plant Bugs – We swept some cotton (about to bloom) again this week for tarnished plant bug (TPB), *Lygus lineolaris*, and easily found populations exceeding threshold in untreated cotton and in non-ThryvOn cotton sprayed with imidacloprid (Admire Pro at 1.7 fl oz/a) 2 weeks ago. In untreated non-ThryvOn cotton, we observed about 16 adults per 100 sweeps (twice the threshold). In untreated ThryvOn cotton, we saw about 8 adults per 100 sweeps (right at threshold). In cotton treated 2 weeks ago with imidacloprid, numbers of adults were also at 16 per 100 sweeps, so that cotton will need another application. Numbers of TPB adults were well below treatment threshold in ThryvOn and non-ThryvOn cotton I sprayed with sulfoxaflor (Transform at 2 oz/a) and novaluron (Diamond at 6 fl oz/a) about 2 weeks ago. Despite these numbers of TPB in our sampling, estimates of square retention continue to be excellent this week (above 90%). We will switch over to drop-cloth sampling next week, as the crop starts blooming. Use a sweep net in pre-blooming cotton, and look for the adults that crawl up and fly out of the net when examining the contents, but use a black drop cloth after blooming starts to see the small green nymphs running on the cloth.

Stink Bugs – I have already spotted numerous stink bugs in our research plots. I saw this brown stink bug yesterday hanging out on cotton that is just getting ready to bloom. **Be sure to note when each field is in the first week of bloom!** This is defined as when every other plant has its initial bloom. Treatment thresholds for stink bugs depend on knowing the week of bloom, so record that now for each field scouted!





April May June July August September



Soybean Situation

As of 9 July 2023, the USDA NASS South Carolina Statistical Office estimated that about 93% of the crop has emerged, compared with 85% the previous week, 98% at this time last year, and 92% for the 5-year average. About 9% of the crop is blooming, compared with 6% the previous week, 27% at this time last year, and 14% for the 5-year average. About 1% of the crop is setting pods, compared with 0% the previous week, 0% at this time last year, and 0% for the 5-year average. The conditions of the crop were reported as 4% excellent, 80% good, 16% fair, 0% poor, and 0% very poor. These are reported statewide averages.

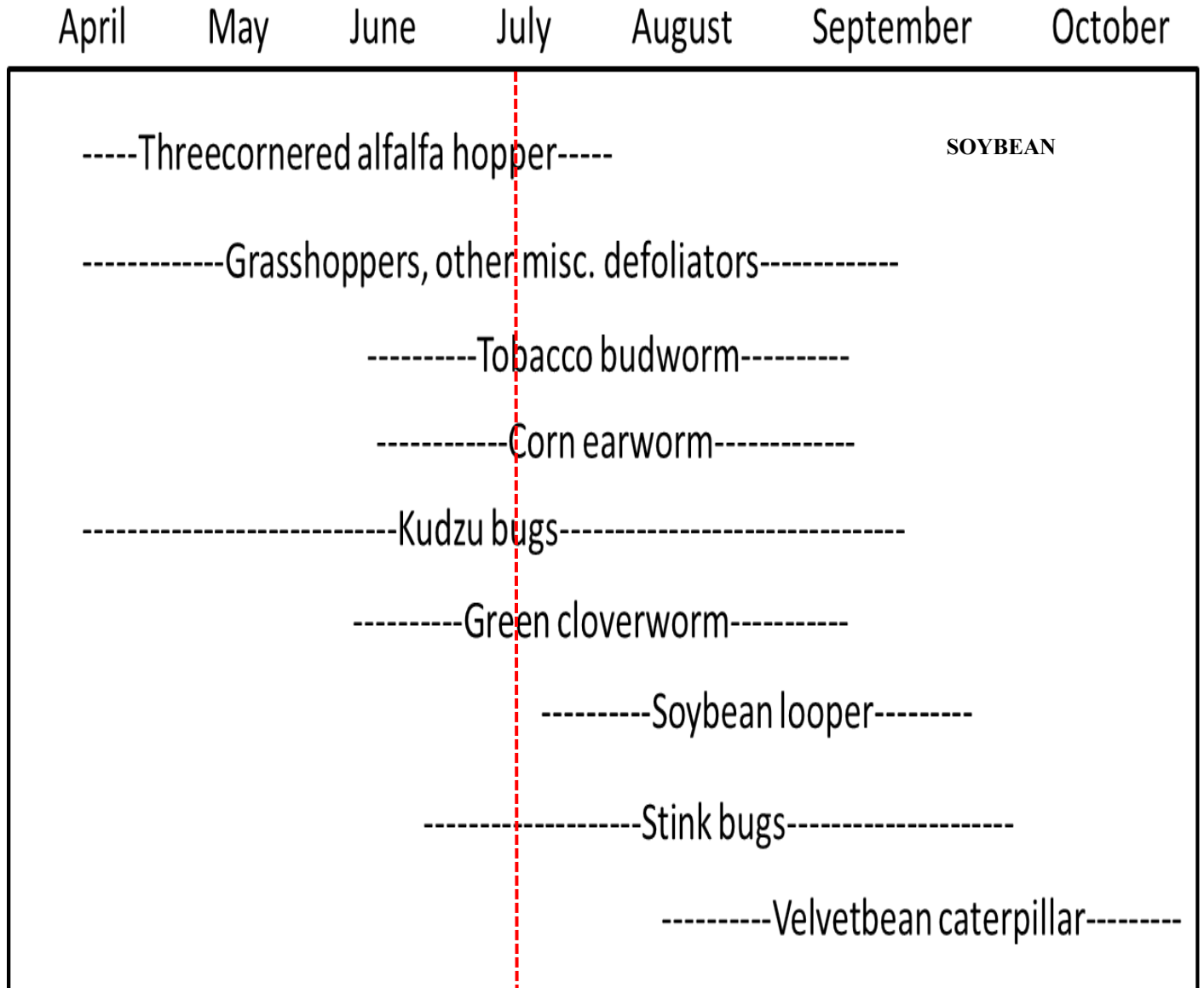
The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating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

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.



Soybean Insects

Again this week, problems with insects in soybeans have not been widely reported, although pests are slowly building in the crop. Continue to watch out for problems with grasshoppers, kudzu bugs, and threecornered alfalfa hopper. I will spray some soybeans tomorrow for a building population of grasshoppers, but that is in a field I am trying to keep clean for research with simulating injury. At this point, the field would be just fine for a grower, as some insect injury is tolerated well in soybeans. In fact,



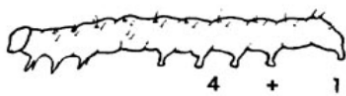
yield can actually be enhanced by low levels of insect injury. This is called overcompensation, and the soybean plant is very good at it. So, use recommended thresholds, knowing that you cannot prevent all damage and that a small amount of injury can be beneficial.

*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 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.*

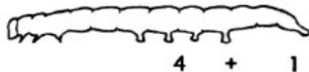


As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.

FIELD KEY TO COMMON SOYBEAN CATERpillARS



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



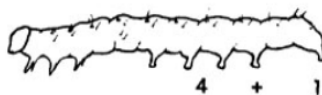
VELVETBEAN CATERPILLAR
4 + 1 pair prolegs
Very active when handled



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.

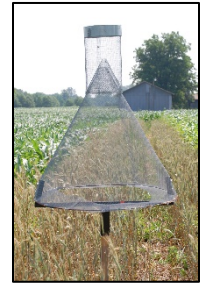


Bollworm & Tobacco Budworm

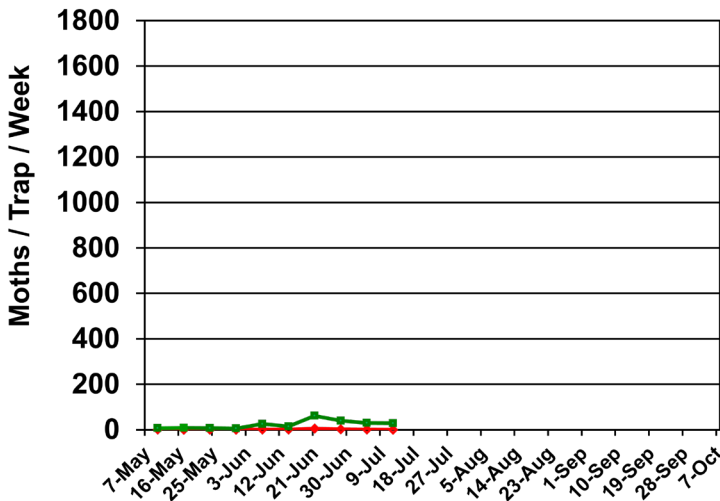


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2022 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

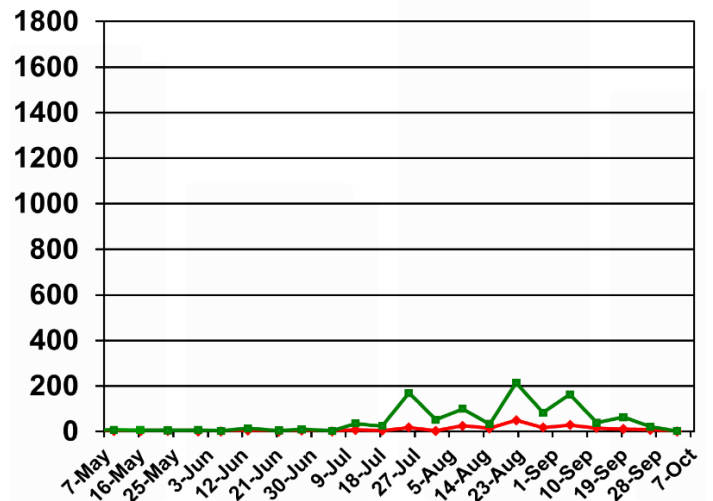
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.



Pheromone Trap Capture SC - 2023

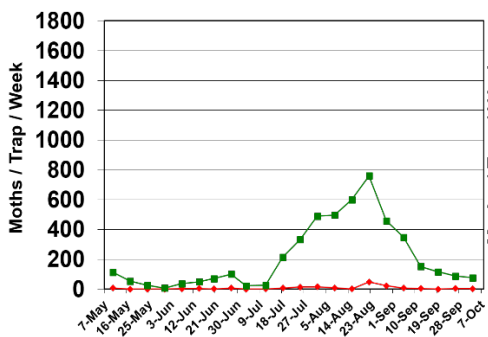


Pheromone Trap Capture SC - 2022

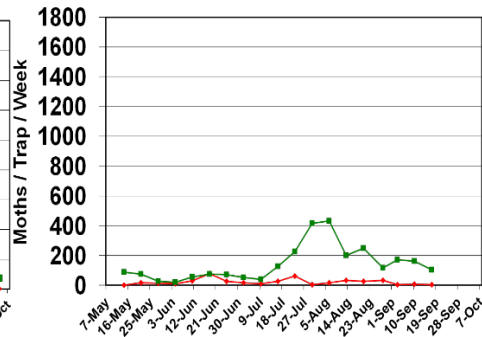


Trap data from 2007-2021 are shown below for reference to other years of trapping data from EREC:

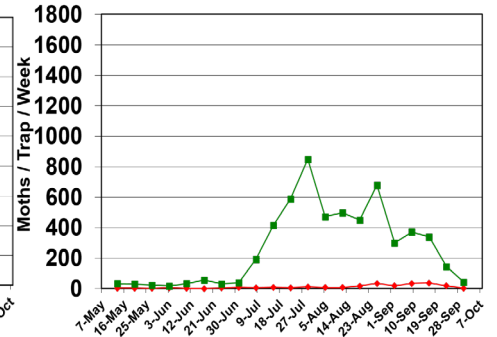
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



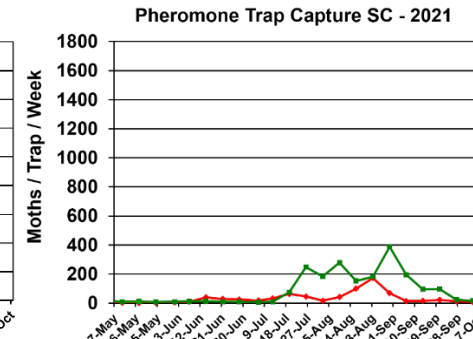
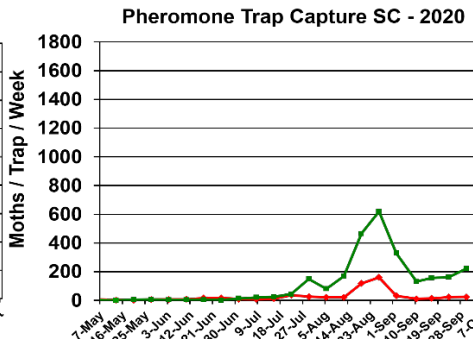
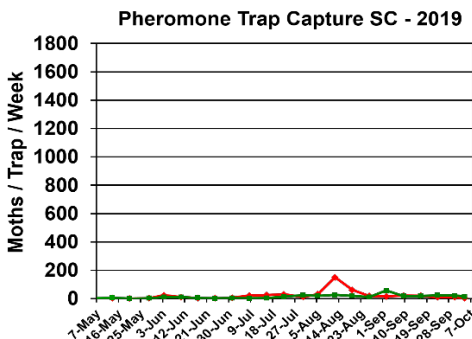
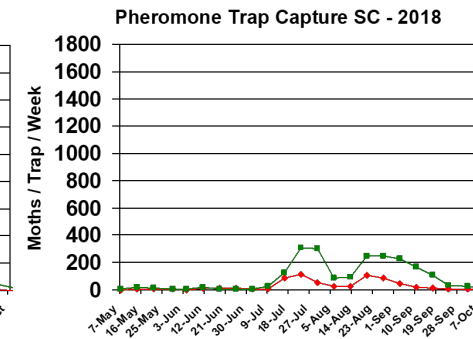
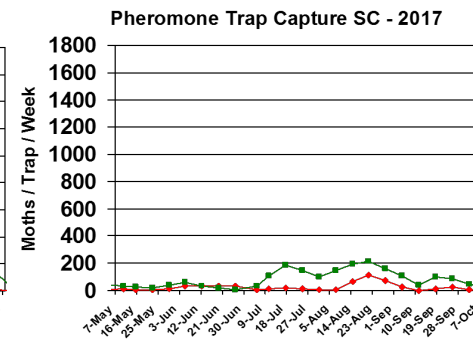
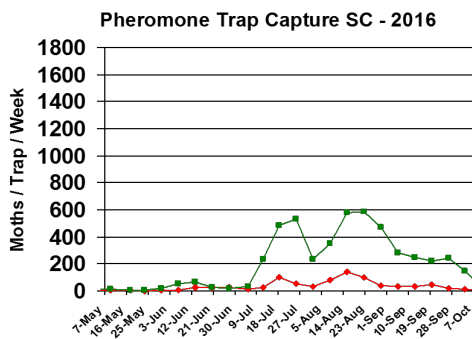
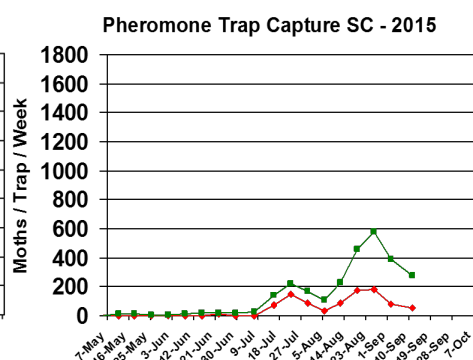
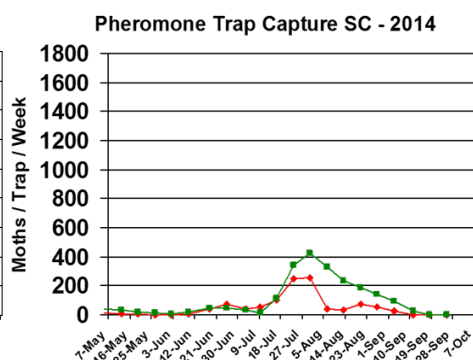
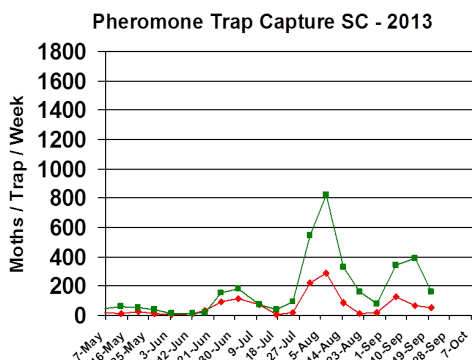
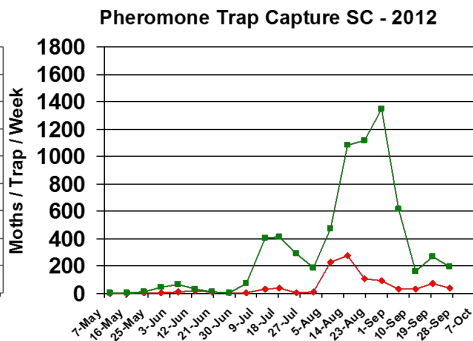
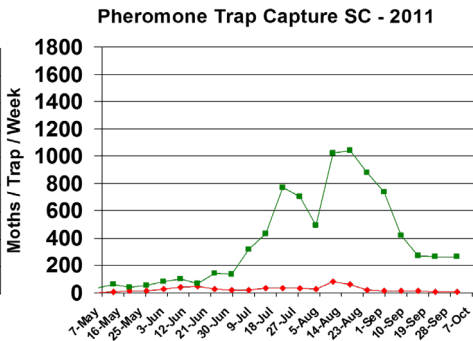
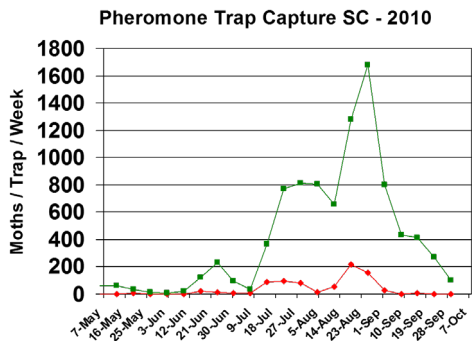
Pheromone Trap Capture SC - 2009





COOPERATIVE EXTENSION

College of Agriculture, Forestry and Life Sciences



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 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 – 2023

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

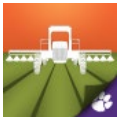
<https://www.clemson.edu/extension/agronomy/files/pest-management-handbook-clemson-extension.pdf>

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



Visit our website at:
<http://www.clemson.edu>