Cotton/Soybean Insect Newsletter

Volume 14, Issue #4 Edisto Research & Education Center in Blackville, SC 14 June 2019

Pest Patrol Alerts

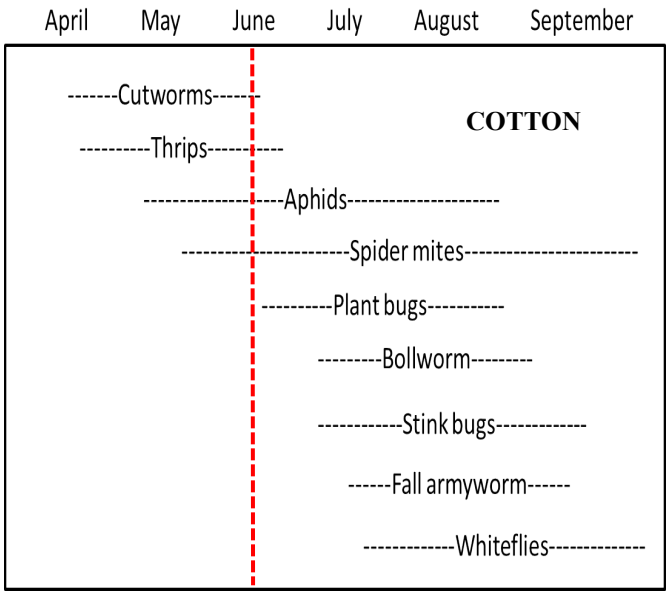
The information contained herein each week is available via text alerts that direct users to online recordings. I will update the short message weekly for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users 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 the 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

Drake Perrow, consultant in Calhoun County, reported that he observed beet armyworms on pigweeds at noticeable numbers. **William Hardee**, county agent covering Horry and Marion Counties, reported that "brown and southern green stink bugs are bad in [his] area. Seeing some ear curl on corn and leaves wilting in tobacco. Not soybean and cotton news, but [folks] should be on the lookout at least." I am hearing of separate reports of squares on the ground and plant bugs being present, and that is scaring a lot of folks. We don't need to panic and all spray every field. That would not be good. Every field needs to be scouted to determine if plant bugs are there and part of the problem. Many of the dropped squares I am betting were caused by physiological shed – too much hot, dry weather followed by too much rain at once. We will cover plant bugs more below. I also found CEW in non-Bt corn ears today (pic below on trap chart).



Cotton Situation

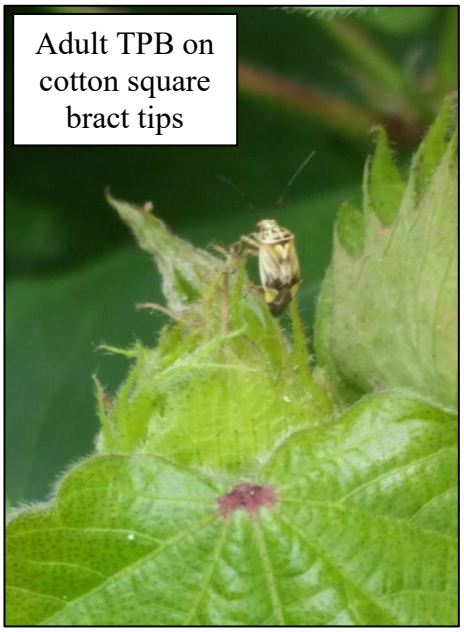
As of 10 June 2019, the USDA NASS South Carolina Statistical Office estimated that about 98% of the crop has been planted, compared with 94% the previous week, 91% at this time last year, and 92% for the 5-year average. About 3% of the crop is squaring, compared

with 0% at this time last year, 3% at this time last year, and 5% for the 5-year average. The condition of the crop was described as 1% excellent, 56% good, 35% fair, 8% poor, and 0% very poor. These are observed/perceived state-wide averages.

Cotton Insects

Although thrips have been an extended pest this season, we will shift our focus this week to tarnished plant bugs, aphids, and spider mites. Spider mites should have been knocked back pretty good by the rains we had this past week, but don't stop looking for them, as it doesn't take long to develop problems with them again. More rain in the forecast for next week will hopefully continue to help with spider mites.

Tarnished plant bug (TPB) is likely becoming more of an issue, and we want to survey this season to see where we are in the state with importance of this pest. It is NOT as bad of a problem for us here in the Southeast as it is for growers in the Mid-South; however, there is more concern in recent years, and some of that is valid. I had one plant bug trial last year, and we exceeded threshold for TPB in that test. There were no statistical differences in yield in that trial, but we did make a little more cotton in the sprayed treatment. IF that numerical increase was real, I am estimating that it might have been about 50-70 lb of lint, but that is just a guess. That was one trial, and the focus was on TPB in that trial. It was planted near corn, a crop interface that can heighten the risk of TPB problems in adjacent cotton. Cotton that has squares on it needs to be rated for square retention, but that does not always tell you what you need to know. In that trial last year at 8-9 nodes, square retention was between 70 and 85% the first time we checked it. Retention of squares was over or at 90% the next two weeks we checked it at 10 and 12 nodes, respectively. That is when we exceeded the threshold of 8 TPB per 100 sweeps, so you have to go look for the bugs. You cannot just check square retention and think all is well or that it needs to be sprayed. Check squaring cotton for adult TPB now, and only consider treating if you exceed 8 TPB/100 sweeps. Get sweep nets from www.sweepnets.com ($47 each), www.gemplers.com ($78 each), or anywhere else you can find them for sale. You will most likely only see adults in samples now on pre-bloom cotton. We didn't start detecting nymphs until July last year when we switched over to using a black drop cloth for sampling. Get drop cloths from www.greatlakesipm.com ($24 each) or anywhere else you can find them for sale. You will want to switch to a drop cloth when the cotton gets big enough to sample with a drop cloth (plants tall enough to bend over the cloth and shake out insects). Sweep nets are most useful only when the cotton is really too small for a drop cloth, and they are really only good for counting adults. When nymphs are present, you want to use the drop cloth to detect them.


Adult TPB on cotton square bract tips

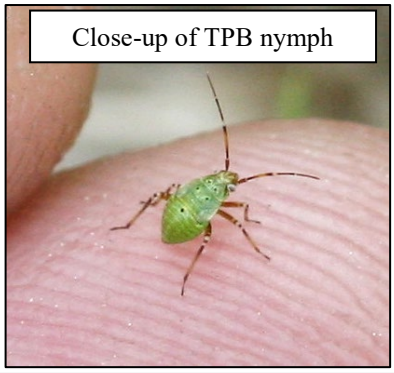
CLEMSON UNIVERSITY

Here are few more photos of TPB as adults or nymphs. When searching for the adults in sweep nets, be quick, as they will fly extremely fast from the net, and you do not want to confuse them with other insects, such as the bigeyed bug. The young nymphs will be small, green, and crawl much faster than an aphid. As small immatures, TPB can be the same size as aphids, so don't get them confused. Aphids crawl very slowly on the drop cloth. TPB nymphs crawl very fast compared with aphids.

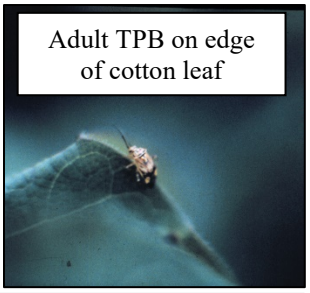
Nymph and adult TPB on cotton square

Close-up of adult TPB

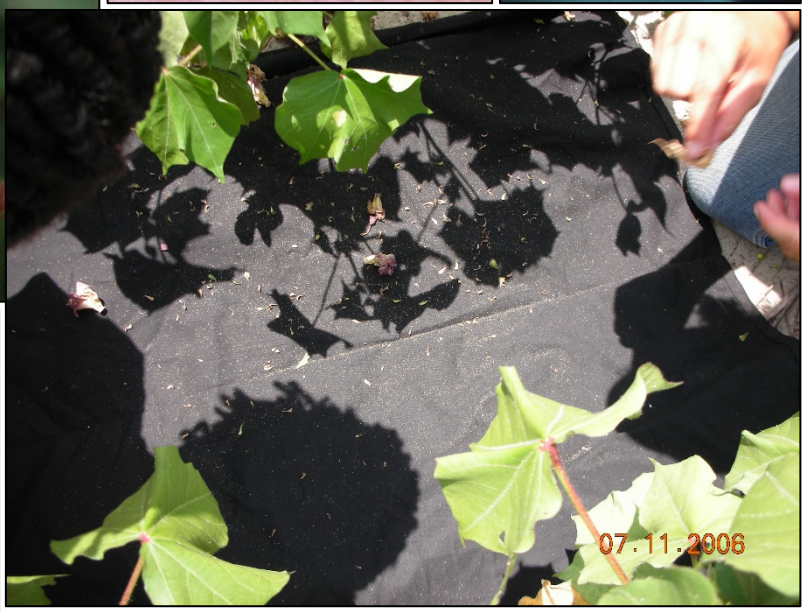
Close-up of TPB nymph



Adult TPB on edge of cotton leaf



Adult TPB on cotton bloom



Get out there and sample squaring cotton for TPB with a sweep net now. Don't rely on "coffee shop talk" for expensive spray decisions, especially for plant bugs!

Cotton aphid is capable of transmitting a virus to cotton that has been detected here in the Southeast, and we will be focusing on that a little here and more next week. The disease that shows up after infected aphids feed on cotton is called Cotton Blue Disease. It gets that name because one of the symptoms is darkened leaves that almost look blue in color. Most of the other symptoms are tightly stacked nodes, cupped and crinkled leaves, and other discolorations. Here a few photos of the symptoms.

CLRDV
(Blue disease)

Information courtesy of Dr. Alana Jacobson, Auburn

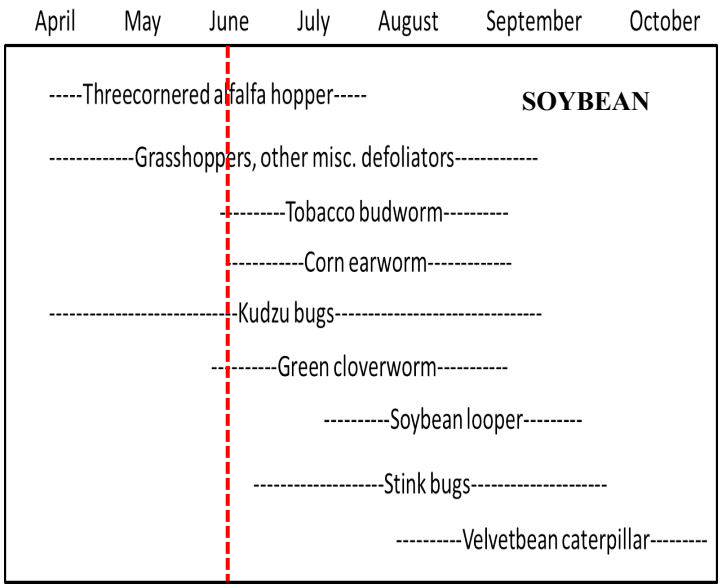
CLRDV
(Blue disease)

Information courtesy of Dr. Alana Jacobson, Auburn

The disease was found in numerous counties in AL, some counties in GA, and two counties in SC last season. We plan to survey for incidence of the viral pathogen this season across the state. The vector, cotton aphid, can transmit the virus very quickly if infected with it, so it is impossible to prevent this pathogen from being transmitted to a given field. We will be researching this season to see if we can slow the spread of the virus by treating for aphids. Do NOT panic about this issue! We have a lot of questions to answer before we start trying to spray all of the aphids we see and cause bigger problems with other pests or at least our wallets. I suspect that we have had this virus for some time and that we often see selected plants with severe symptomology. So, my stance has not changed on aphids…I think they are mostly food for our beneficials in the field and allow them to build and exert pressure on bollworm that tries to get through the Bt technology later. I still believe that we do not need to worry about aphids unless they get really bad on young cotton or continue to stress cotton that might already be under stress. Let's keep an eye out for aphid infestations and watch out for disease symptomology.

Soybean Situation

As of 10 June 2019, the USDA NASS South Carolina Statistical Office estimated that about 53% of the crop has been planted, compared with 41% the previous week, 77% at this time last year, and 67% for the 5-year average. About 39% of the crop has emerged, compared with 27% the previous week, 45% at this time last year, and 48% for the 5-year average. The condition of the crop has yet to be described by the office (--% excellent, --% good, --% fair, --% poor, and --% very poor), but it will be soon. These are observed/perceived state-wide averages.

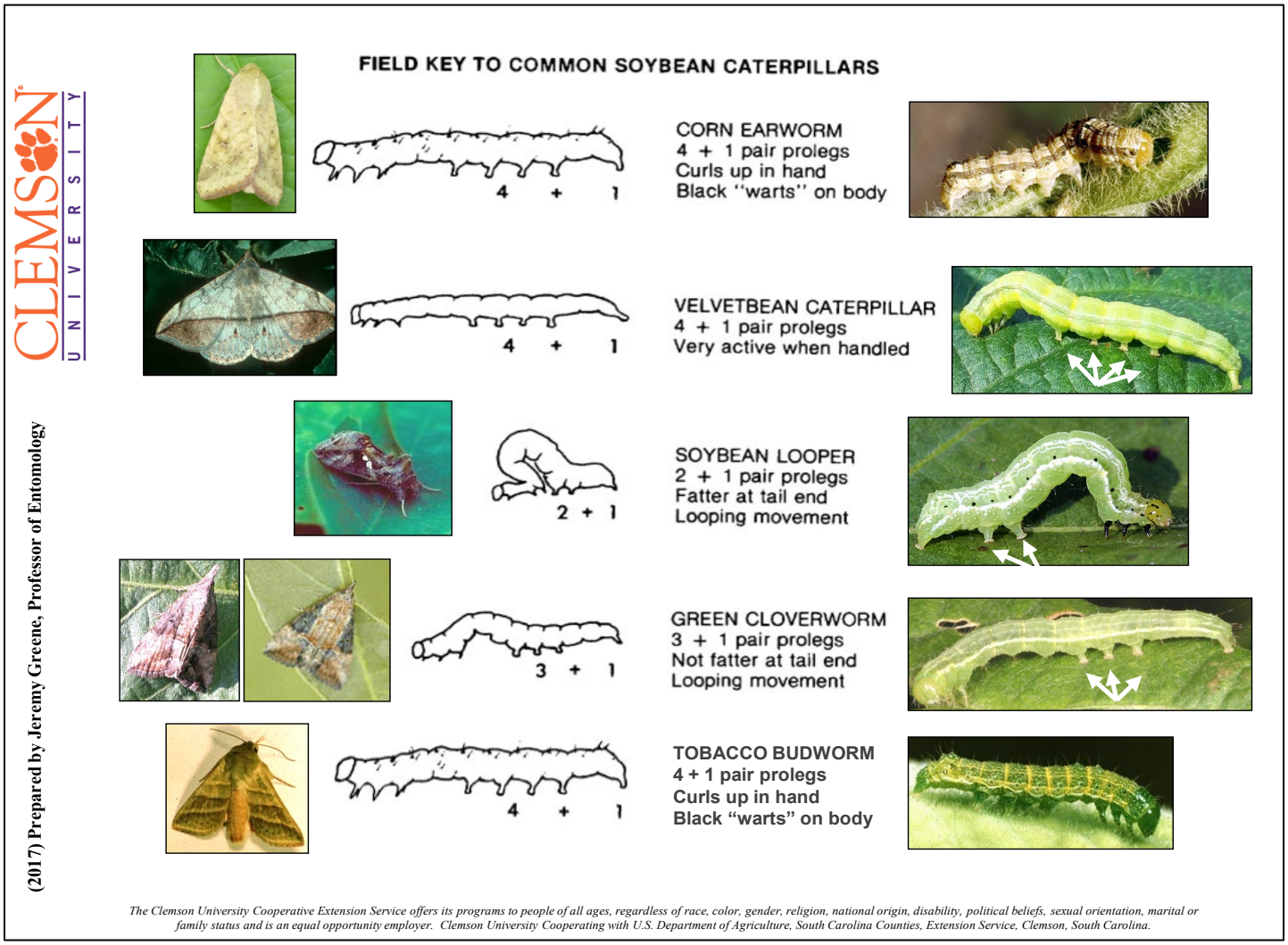


Soybean Insects

Once again this week, deer continue to be a problem, especially in the early soybeans (planted mid-April) in my planting date study. I cannot spray any more repellents on my plots because we don't want to kill the insects we want to count. We put fence posts and Plot Saver tape up around that test today. You can get that from www.plotsaver.com

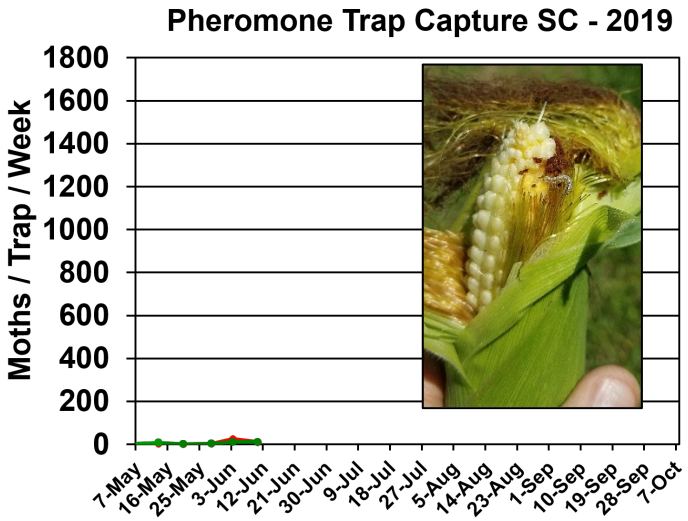
We still have plenty of grasshoppers and threecornered alfalfa hopper (TCAH) as the most numerous insects in our sampling so far, but I also easily saw stink bugs in the field today on April planted soybeans that were blooming. It it could be a big stink bug year…saw some easily in corn today when I just glanced at some corn.

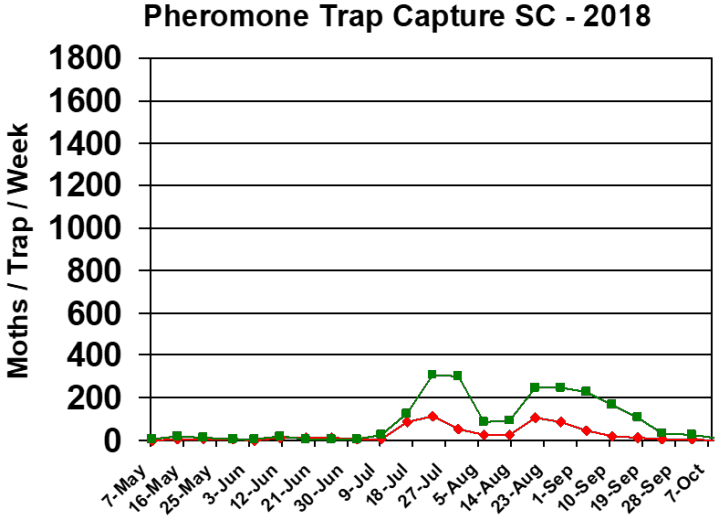
It is never too early to start talking about identifying caterpillars and moths. Start familiarizing yourself with these major species.



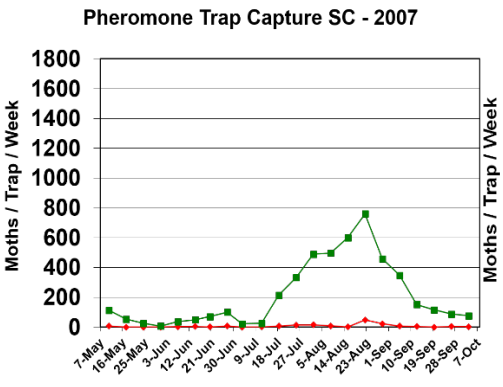
Bollworm & Tobacco Budworm

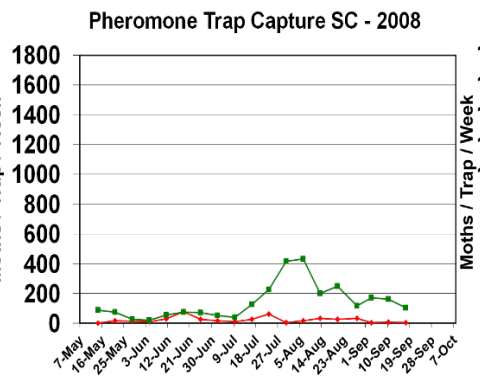
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2018 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.

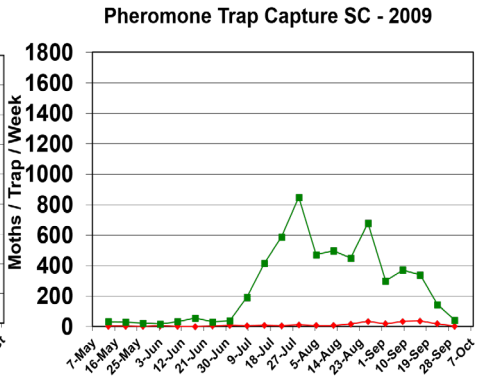


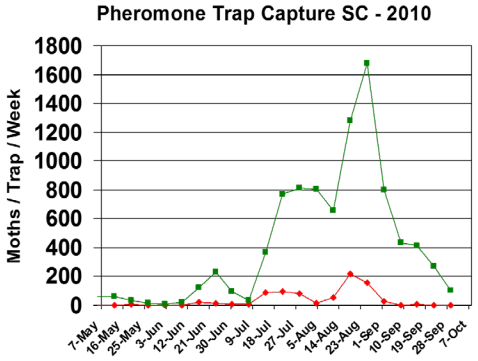


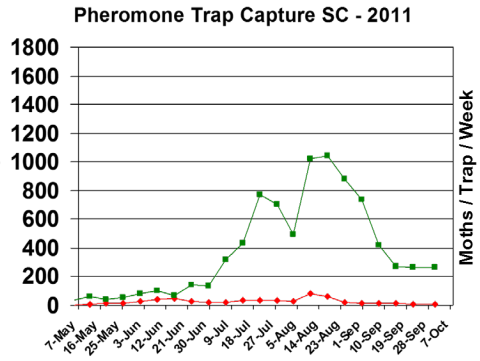
Trap data from 2007-2017 are shown below for reference to other years of trapping data from EREC:

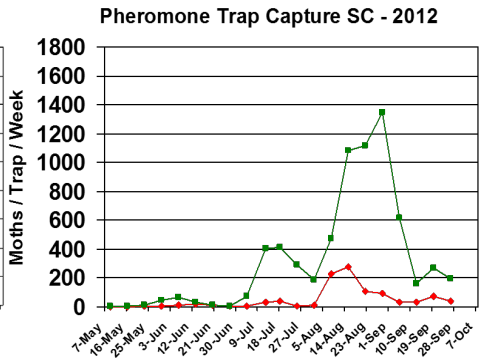


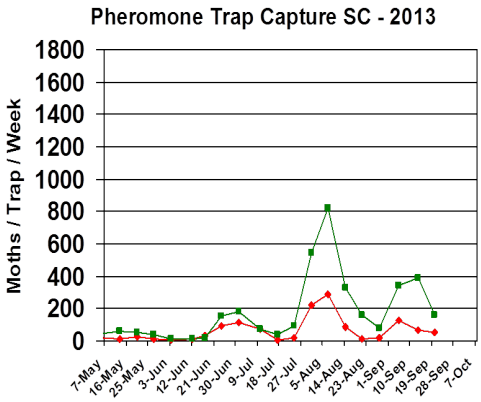


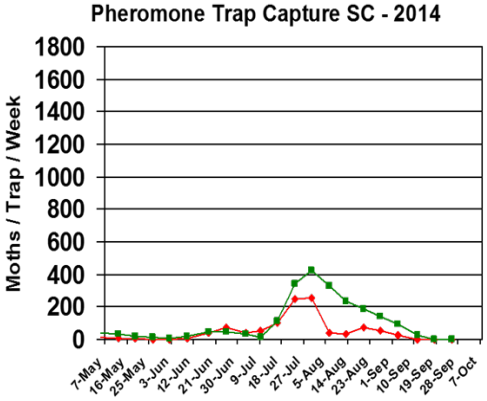


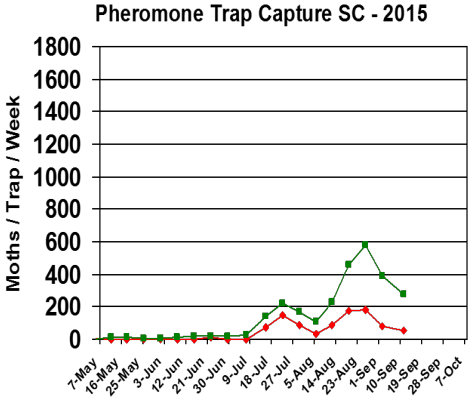


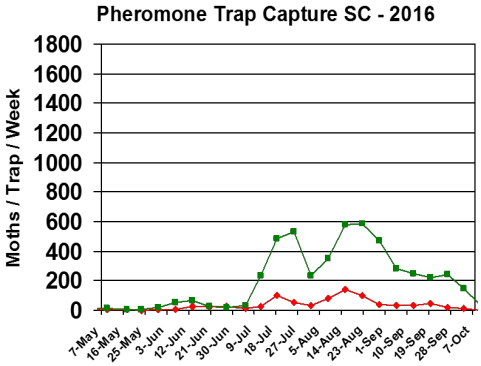


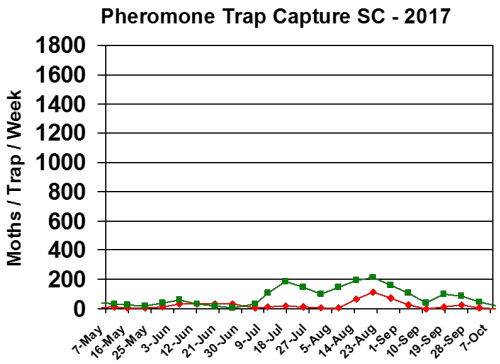








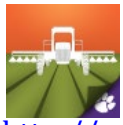




Pest Management Handbook – 2019

Insect control recommendations are available online in the 2019 South Carolina Pest Management Handbook at:
https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html

Free Mobile Apps: "Calibrate My Sprayer" and "Mix My Sprayer"



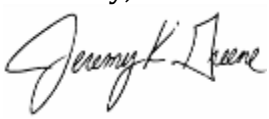
Download our free mobile apps called "Calibrate My Sprayer" and "Mix My Sprayer" that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):
http://www.clemson.edu/extension/mobile-apps/

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

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