Cotton/Soybean Insect Newsletter

Volume 17, Issue #7 Edisto Research & Education Center in Blackville, SC 17 June 2022

Pest Patrol Alerts

There was a disruption in text alerts sent out recently, so, if you have not received text alerts from the Pest Patrol program this year and you had previously and want to continue receiving them, go through the steps below again. This is not required, if you have been receiving Pest Patrol texts this season for my recorded messages. Thanks.

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 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

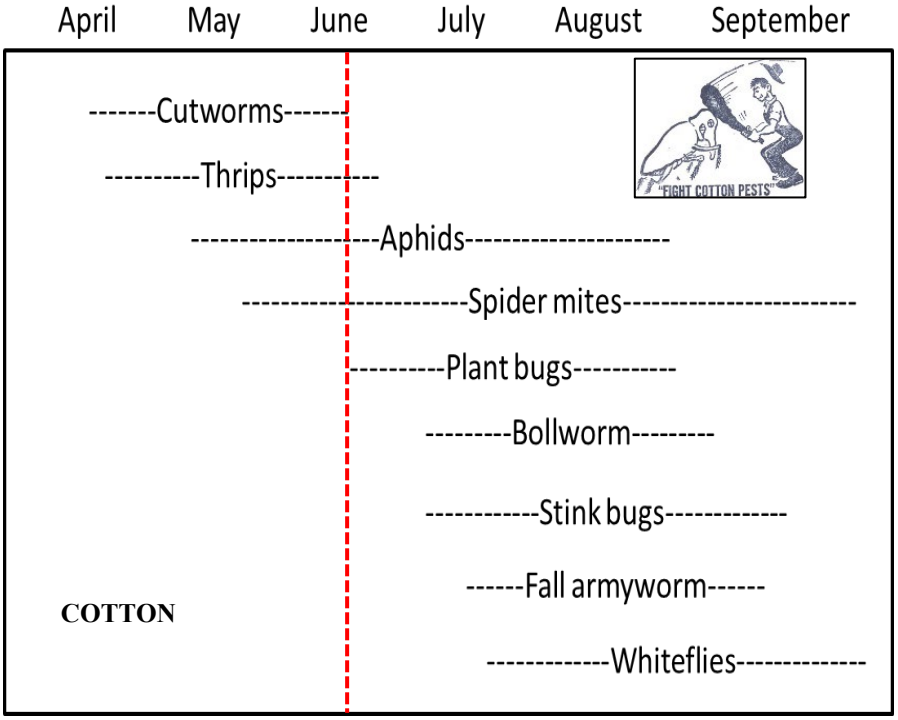
Joe Varn, county agent in Barnwell County, reported some deer damage in seedling cotton this past week. I was told this field had aldicarb (AgLogic) at planting, so this is disturbing.

Cotton Situation

As of 12 June 2022, the USDA NASS South Carolina Statistical Office estimated that about 96% of the crop has been planted by this week, compared with 92% planted the previous week, 94% at this time last year, and 94% for the 5-year average. About 3% of the crop is squaring, compared with 1% the previous week, 9% at this time last year, and 11% for the 5-year average. The conditions of the crop were 7% excellent, 49% good, 40% fair, 4% poor, and 0% very poor. These are reported statewide averages.

Cotton Insects

All of the sweet corn I shucked on Wednesday evening had large corn earworms (CEW) in the ear tips. So, take that information for what it is. As you know, this generation develops in corn as CEW, the larvae pupate in the soil, moths emerge and fly to cotton to lays eggs that feed on cotton as bollworm. We are growing a lot of bollworm in the system right now, and, if we don't have some non-Bt refuge corn out there, most of the surviving CEW will likely be resistant to Bt proteins (used in corn and cotton). Those resistant moths will mate with other resistant moths, and their offspring, hatching out from eggs deposited in cotton, will inherit the genes for resistance. Producers are supposed to plant 20% of their corn acres to non-Bt refuge varieties, so there are susceptible moths mating with the resistant moths, resulting in a "dilution" of the resistance genes. Also, I noticed considerable reproduction by stink bugs in corn. Pictured to the right are immatures of the southern green stink bug just hatched out from an egg mass. They were abundant and easy to find in the field this morning.



I have not noticed spider mites of any concern yet, and populations of aphids are building but not abundant yet. The very high numbers of plant bugs we observed last week were down this week but still near threshold. We should continue to monitor square retention and use a sweep net in each field to look for plant bugs until we get to the second week of bloom. At that point, our monitoring and treating for stink bugs should take care of most issues with plant bugs.

I did notice a good population of natural enemies in the field this week, with notable species like spiders, ants,

and bigeyed bugs becoming prominent in fields yet to be sprayed for insects. This is a good sign. Be sure you are identifying insects correctly. left, bigeyed bug; center, false chinch bug; right, tarnished plant bug

The sweep-net threshold for the tarnished plant bug (TPB) in cotton is 8 bugs/100 sweeps. Some of our counts last week exceeded 100 bugs/100 sweeps week, but the highest count we found this week was 26 bugs/100 sweeps. This is still 3 times over the threshold but much reduced. I sprayed some Thryvon and non-Thryvon plots last week with Transform (2 oz/acre) plus Diamond (6 fl oz/acre, a tank-mix rate) and other plots with Admire Pro (1.7 fl oz/acre). We'll keep counting TPB in these plots and see which ones develop populations of nymphs. As more cotton fields start to square, I think populations of plant bugs spread out and are diluted in the expanding attractive crop. Nevertheless, if you have square retention at or below 75% and have plant bugs at 8 or more per 100 sweeps, you are at threshold and should consider spraying. See our 2022 South Carolina Pest Management Handbook for recommended insecticides.

PLANT BUGS (COTTON FLEAHOPPER AND TARNISHED PLANT BUG)

Product	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
sulfoxaflor Transform 50 WG	 1.5-2.25 oz	0.047-0.071	 -	24 hr	14 d	
acephate Orthene/Acephate 97 Orthene/Acephate 90	 4.1-12.3 oz 4.4-13.3 oz	0.25-0.75	 - -	24 hr	21 d	
imidacloprid Alias 4 F Alias 2 F Admire Pro 4.6	 1.5-2.0 oz 3.0-4.0 oz 0.9-1.7 oz	0.031- 0.0625	 64-83 32-42.6 75-142	12 hr	14 d	
thiamethoxam Centric 40 WG	 2.0-2.5 oz	0.05-0.0625	 -	12 hr	21 d	5 oz limit for season
dicrotophos **(R)** Bidrin 8 E	 4.0-8.0 oz	0.25-0.5	 16-32	6 d	30 d	16 oz limit post bloom
oxamyl **(R)** Vydate 3.77 CLV	 8.5-17.0 oz	0.25-0.5	 7.5-15	48 hr	14 d	
clothianidin Belay 2.13	 3.0-5.0 oz	0.05-0.083	 25.6-42.6	12 hr	Pinhead square	1 application for season
novaluron Diamond 0.83 EC	 9.0-12.0 oz	0.058-0.078	 14.2-21.3	12 hr	30 d	Effective on nymphs only

Plant-bug injury to squares rarely causes economic problems in South Carolina. An economic problem could develop if an early-maturing variety was planted late, an average of 3 plant bugs per 6 rowft is detected using a beat cloth or beat pan, an average of 1 plant bug per 10 sweeps, or 25% or more of pinhead squares have been lost. Cotton in South Carolina is most susceptible to plant bugs around the time of first bloom. Pyrethroid insecticides generally provide supression of plant bugs when applied at stink bug/bollworm control rates. Avoid treating Bt cotton for plant bugs unless absolutely necessary in June and July as subsequent reductions in beneficial populations often trigger problems with bollworm or fall armyworm. Plant bugs can also injure small bolls like stink bugs. For combinations of plant and stink bugs feeding on small bolls, use boll-injury treatment thresholds for stink bugs.

Soybean Situation

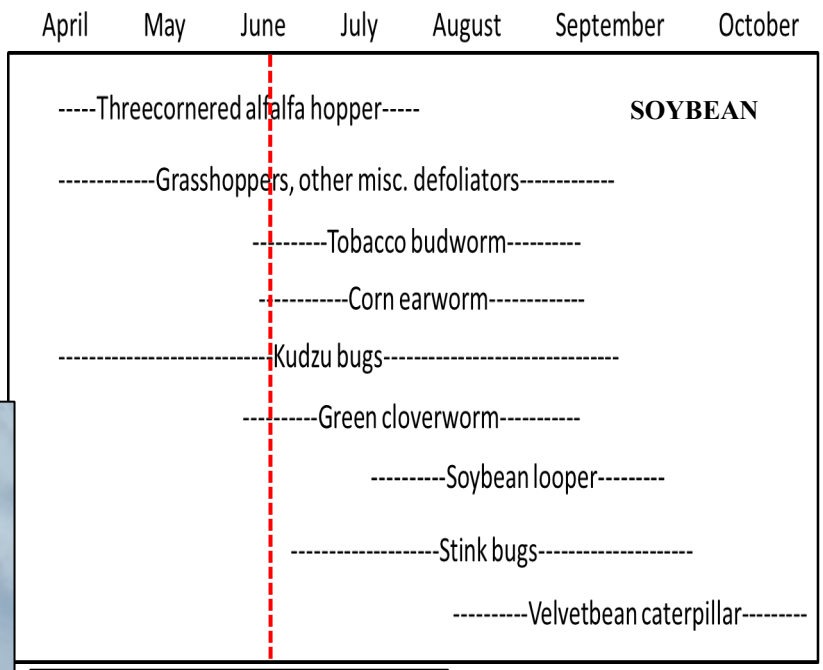
As of 12 June 2022, the USDA NASS South Carolina Statistical Office estimated that about 82% of the crop has been planted this week, compared with 67% planted the previous week, 88% at this time last year, and 73% for the 5-year average. About 65% of the crop has emerged, compared with 40% the previous week, 80% at this time last year, and 55% for the 5-year average. The conditions of the crop were 10% excellent, 68% good, 22% fair, 0% poor, and 0% very poor. These are reported statewide averages.

From the SC Soybean Specialist (Dr. Michael Plumblee)

Michael kept it short this week, stating it is "hot and dry" in the southern portion of the state.

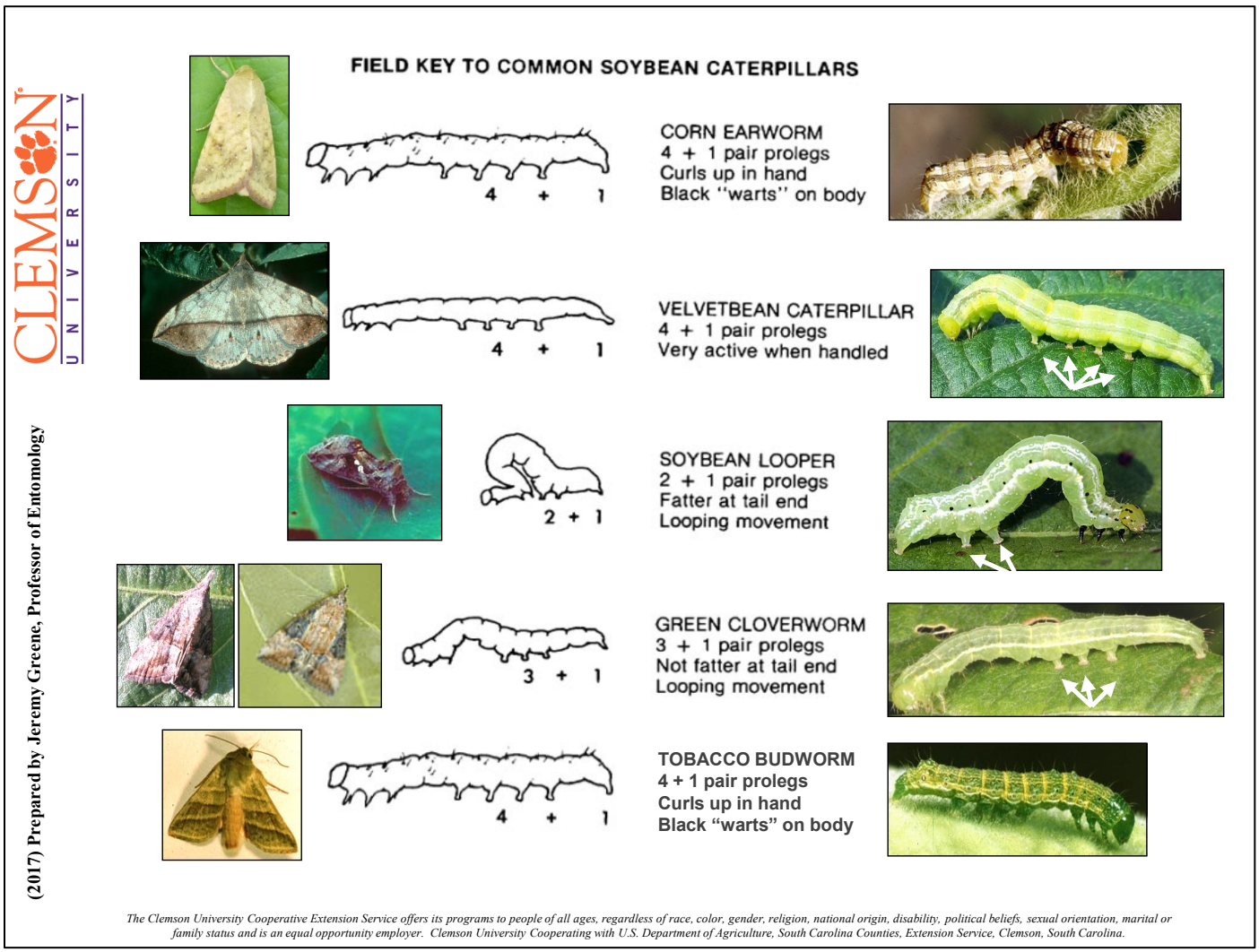
Soybean Insects

I received several reports of false chinch bugs (FCB) being numerous on seedling soybeans. **William Hardee**, county agent covering Horry and Marion Counties, sent the photos of FCB below. Populations of these insects can seem to get out of control, especially when it is hot and dry, and the plants are stressed. In most cases, FCB are not an economic issue.



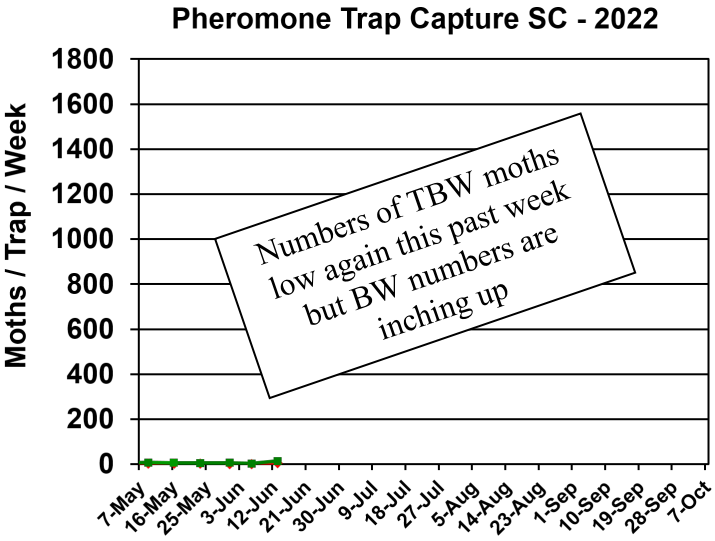
The figure below is for much later in the season, but it stays here as a reminder to learn how to identify larvae and adults (moths).

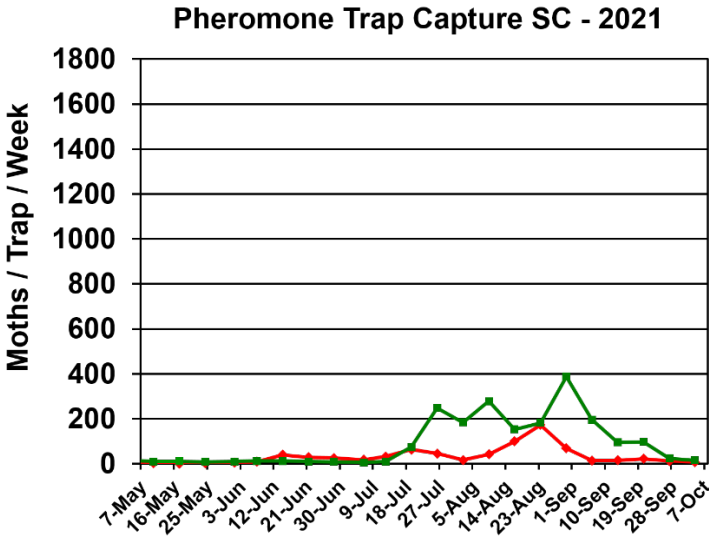
As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.



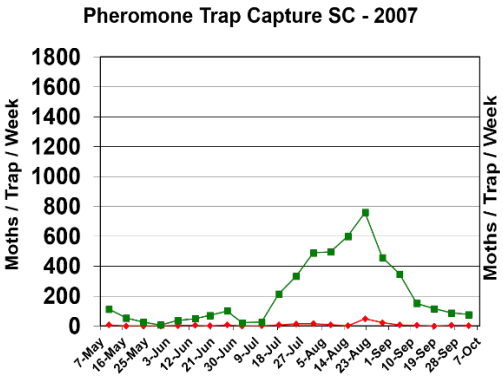
Bollworm & Tobacco Budworm

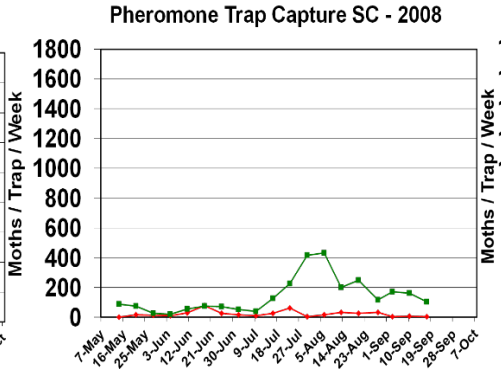
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2020 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of 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.

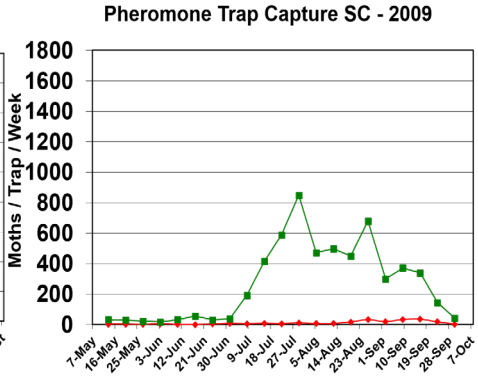


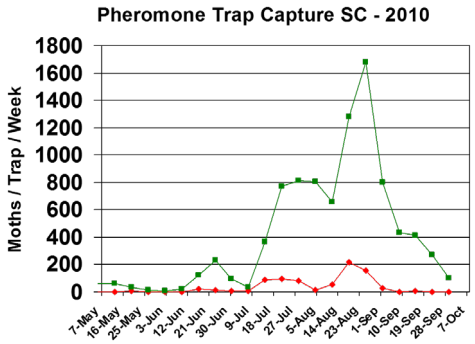


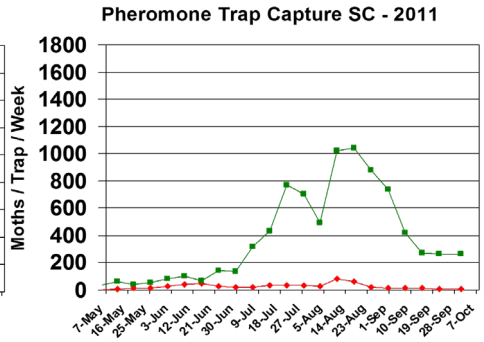
Trap data from 2007-2020 are shown below for reference to other years of trapping data from EREC:

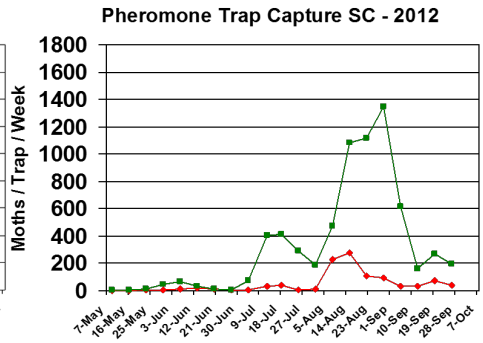


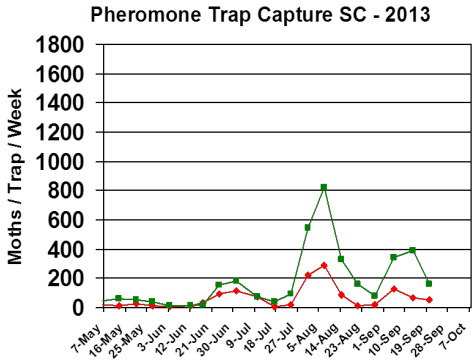


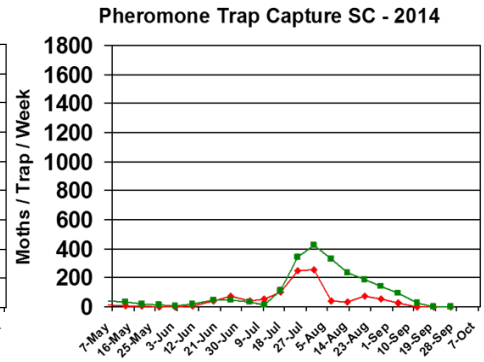


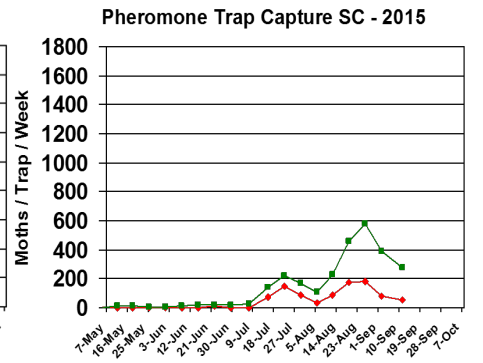


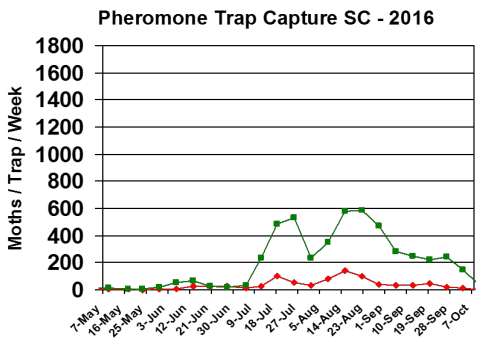


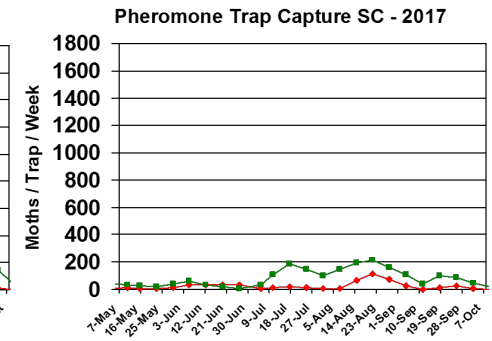


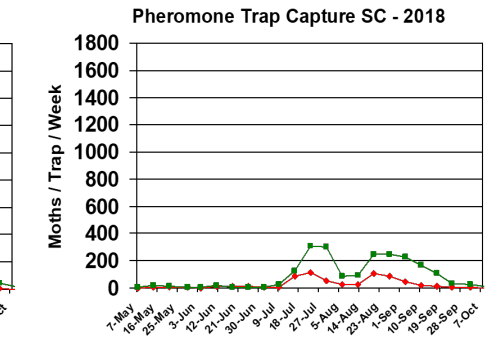


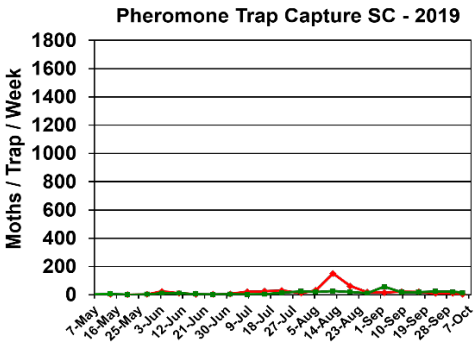


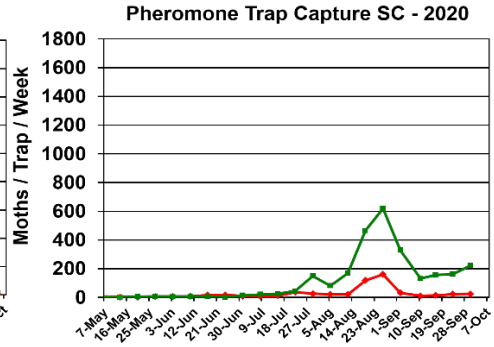












Pest Management Handbook – 2022

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

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