



Cotton/Soybean Insect Newsletter

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26 June 2020

Pest Patrol Alerts

The information contained herein each issue 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 in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at [@bugdocisin](https://twitter.com/bugdocisin) on Twitter.



News from Around the State

Jonathan Croft, county agent in Orangeburg County, reported that he is seeing a few aphids in older cotton. **Charles Davis**, county agent in Calhoun County, had the same report as Jonathan...just aphids. **Drake Perrow**, consultant and producer in Calhoun County, reported that he is seeing large hatch outs of immature grasshoppers and building aphids on some herbicide-stressed cotton at pinhead square. **Hannah Mikell**, county agent in Clarendon County, reported seeing aphids and a lot of false chinch bugs.

Cotton Situation

As of 21 June 2020, the USDA NASS South Carolina Statistical Office estimated that about 94% of the crop has been planted, compared with 90% at this time last week, 100% at this time last year, and 98% for the 5-year average. About 20% of the crop is squaring, compared with 14% at this time last week, 37% at this time last year, and 23% for the 5-year average. The condition of the crop was described as 8% excellent, 42% good, 24% fair, 11% poor, and 15% very poor. These are observed/perceived state-wide averages.

Cotton Insects

We definitely have building populations of aphids and tarnished plant bug (TPB) in cotton, especially early planted fields. In some 12-node cotton, I easily found TPB and cotton aphid this week. We are also seeing many winged aphids in later-planted cotton (4-5 leaves), so aphids will be something to watch out for in the next couple of weeks. Do not go spray for aphids just because they are there. We need a very good reason to spray for aphids, as we have plenty of data that indicate that we do not gain yield from aphid sprays – almost never. Just watch them, and pay attention to the other stressors on the crop. If it gets to

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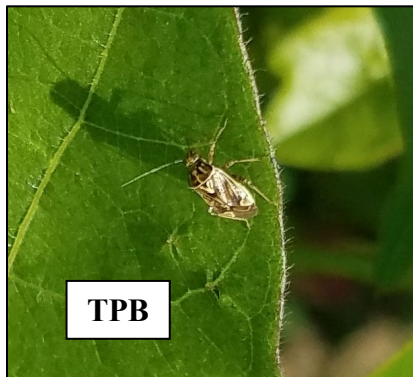
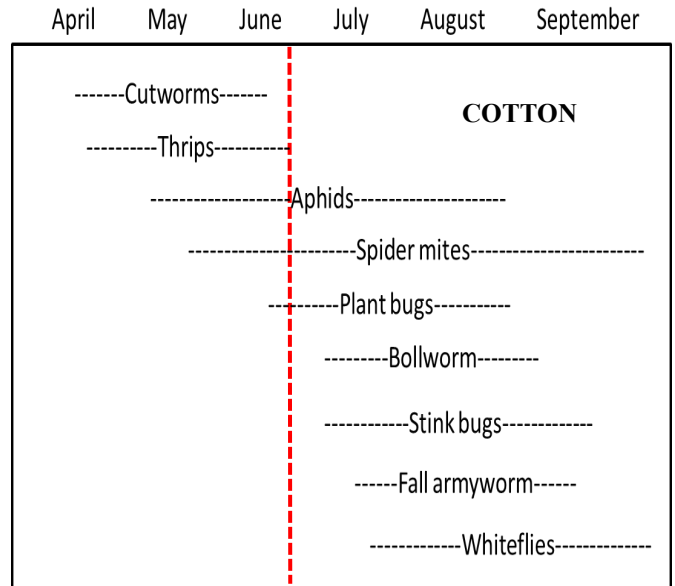
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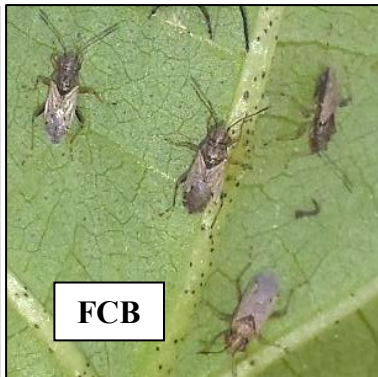


be too much, we can take aphids out, if the natural fungus, *Neozygites fresenii*, that kills cotton aphid doesn't show up or is late.

Properly identifying tarnished plant bug adults and obtaining square retention counts should be the focus right now. Make sure you can identify adults of TPB. Here are some photos of TPB and others that might be confused for TPB. Adults of TPB have a tarnished appearance and a small, pale "letter V" on the dorsum (back or top side). False chinch bugs are dark gray with lighter wings, are much "thinner" than TPB, and do not have the "tarnished" appearance. Bigeyed bugs (BEB) are predators (beneficial) and are similar in size to TPB and FCB, but they have large eyes that protrude on the sides of the head. Know how to recognize these adults. Adults of TPB will be a little larger than FCB and BEB. Adults of FCB will be quick and in groups most likely. Adults of TPB and BEB will be solitary in most cases. Don't confuse the species.



TPB



FCB



BEB

Adults of tarnished plant bug (TPB) (left), false chinch bug (FCB) (center), and bigeyed bug (BEB) (right)

Tarnished plant bug is more important than false chinch bug, as TPB can feed directly on squares and cause fruit loss. FCB can be very numerous and almost swarm on cotton plants, but they cause far less injury and only need to be controlled at very high levels on stressed plants. Bigeyed bugs are good guys! Do not count them in plant bug counts. Remember, monitor square retention, and sweep for plant bugs. You must be able to properly identify the insects in the field! Hopefully, we can have in-person scouting workshops next month. Stay tuned. Continue to monitor for aphids and spider mites. Look for infestations of aphids and symptoms of the Cotton Leaf Roll Dwarf Disease (CLRDD) we have been discussing in recent years. We will talk more about these issues for the next few weeks.

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The section below is from our 2020 Pest Management Handbook (link near end of newsletter), and it contains treatment threshold and insecticide information for plant bugs. Use a sweep net across two rows for counts of adult plant bugs, and monitor square retention by looking for the presence or absence of the first position square on the top 3 to 5 nodes of multiple plants in each field. Check at least 10 plants in several locations in each field to get a good idea about square retention. Pair those estimates with counts of adults from sweep nets to see if you have threshold levels for TPB in pre-bloom cotton.

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 Couraze 4 F Couraze 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 control 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 21 June 2020, the USDA NASS South Carolina Statistical Office estimated that about 80% of the crop has been planted, compared with 67% the previous week, 75% at this time last year, and 84% for the 5-year average. About 65% of the crop has emerged, compared with 52% the previous week, 60% at this

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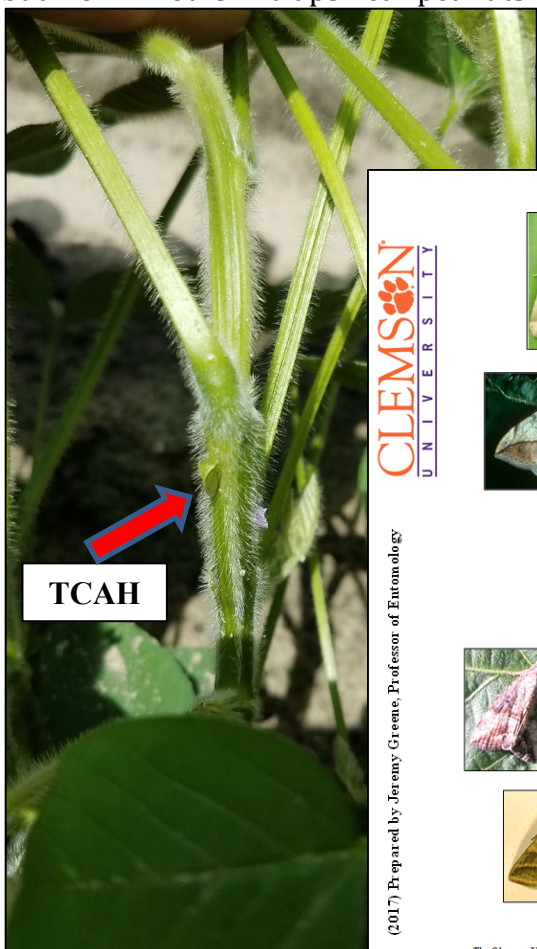
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time last year, and 72% for the 5-year average. The condition of the crop was described as 20% excellent, 52% good, 19% fair, 4% poor, and 5% very poor. These are observed/perceived state-wide averages.

Soybean Insects

Again this week, arthropods do not seem to be causing widespread issues in soybeans. I did see some threecornered alfalfa hoppers (TCAH) (picture below), kudzu bugs, and grasshoppers this week, but nothing was abundant. It is never too early to start looking for moths and getting to know how to recognize the adult stage of many different pest species we see as larvae in the crop. See below for that key information. Counts were up of tobacco budworm moths in traps near peanuts this week.


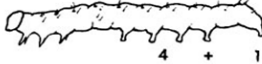


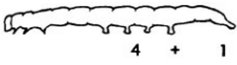








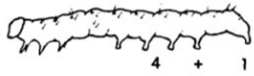



April May June July August September October

April	May	June	July	August	September	October
						SOYBEAN
						-----Threecornered alfalfa hopper-----
						-----Grasshoppers, other misc. defoliators-----
						-----Tobacco budworm-----
						-----Corn earworm-----
						-----Kudzu bugs-----
						-----Green cloverworm-----
						-----Soybean looper-----
						-----Stink bugs-----
						-----Velvetbean caterpillar-----

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 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

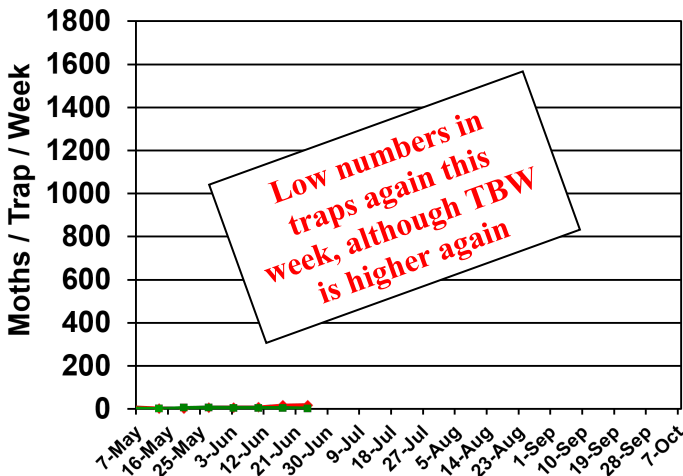


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2019 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

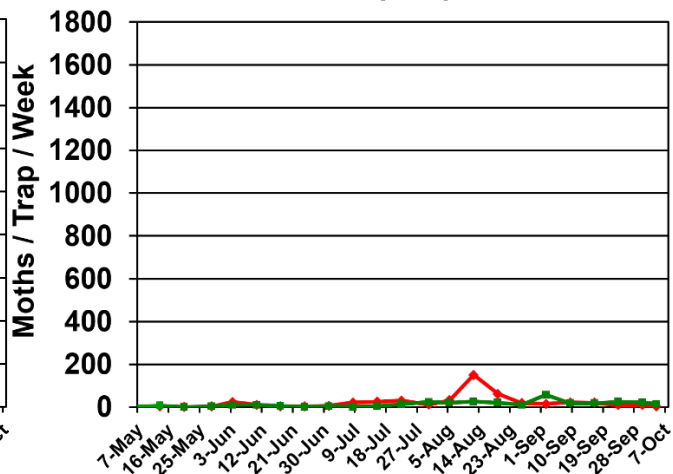
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.



Pheromone Trap Capture SC - 2020

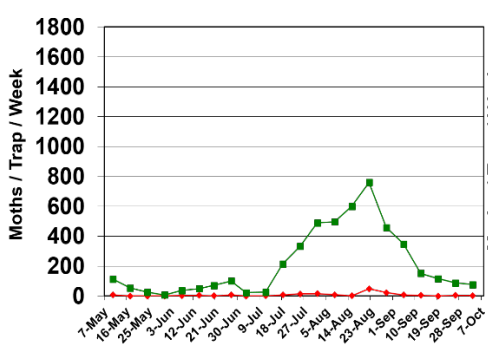


Pheromone Trap Capture SC - 2019

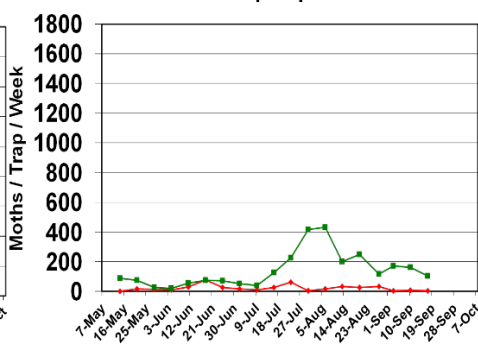


Trap data from 2007-2018 are shown below for reference to other years of trapping data from EREC:

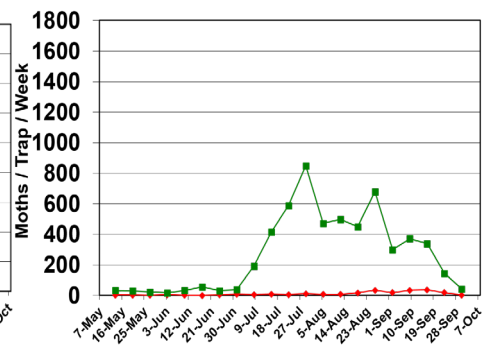
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



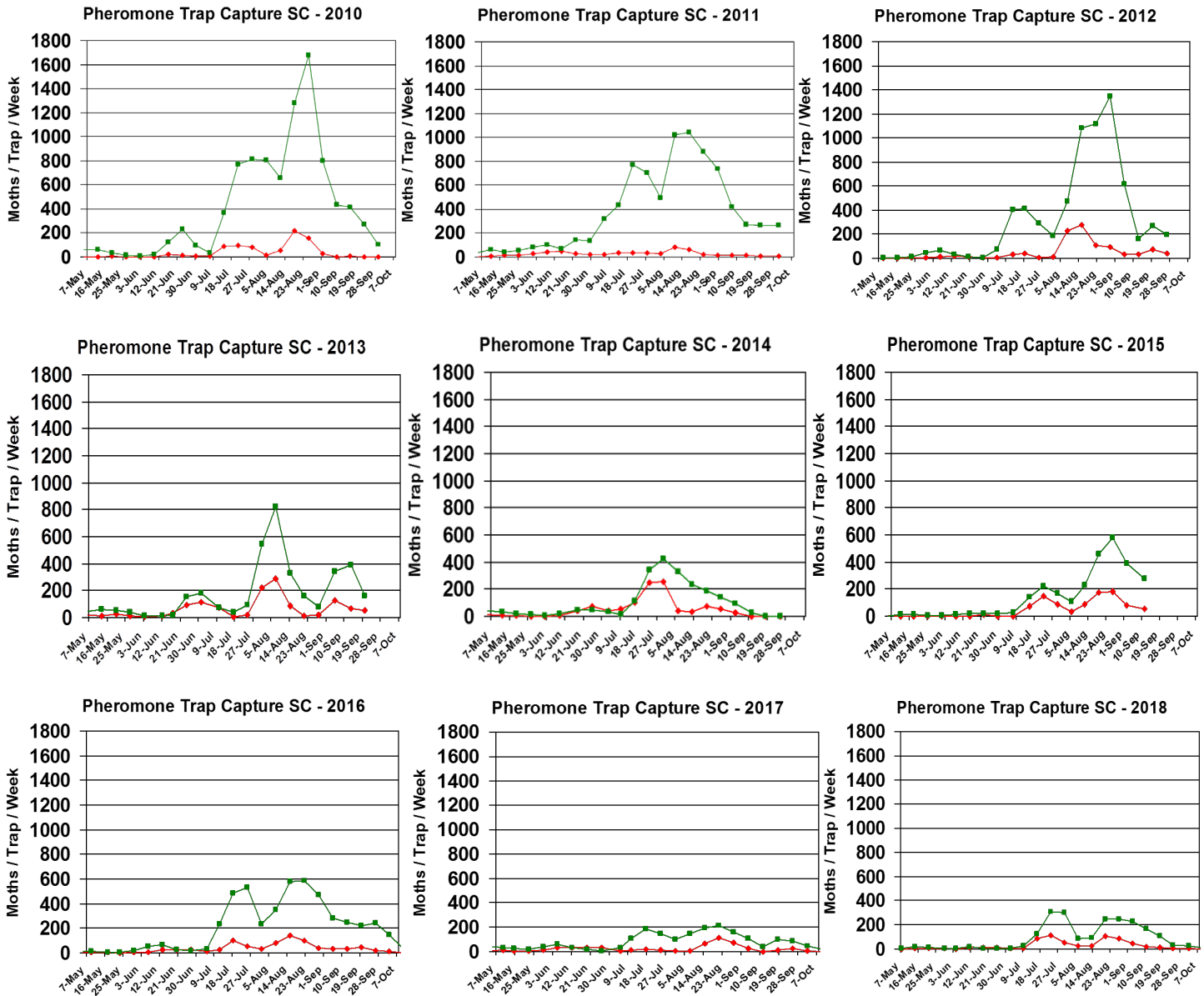
Pheromone Trap Capture SC - 2009



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Pest Management Handbook – 2020

Insect control recommendations are available online in the 2020 South Carolina Pest Management Handbook at:

<https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html>

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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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