



Cotton/Soybean Insect Newsletter

Volume 14, Issue #13 Edisto Research & Education Center in Blackville, SC 3 September 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 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.



Row-Crop Field Day – Rescheduled

Because of the threat of hurricane Dorian moving up the coast and its predicted location off the coast of SC on Wednesday/Thursday, we have decided to cancel the Row-Crop Field Day at Edisto REC scheduled for 5 September 2019. We have **rescheduled** the event for a week later on 12 September 2019. Peanuts will be covered in the AM tour, and all other crops (cotton, soybean, etc.) will be covered in the PM tour. Pesticide license and CCA credits will be offered.

News from Around the State

Jay Crouch, county Ag agent in Newberry County, reported late last week that “velvetbean caterpillar numbers and immature kudzu bug counts exploded since last week. Treatments are starting due to continued low incidence of fungus in kudzu bugs. Cloverworm populations seem steady, few to no podworms in beat cloth samples. Cotton continues to mind its own business, and defoliation will start soon in my area.” **Chris Talley**, county Ag agent in Anderson County, reported last week that he “swept a couple of fields this week and only saw a few soybean loopers. Did see a good many VBC, though.”

Cotton Situation

As of 1 September 2019, the USDA NASS South Carolina Statistical Office estimated that about 100% of the crop is setting bolls, compared with 99% at this time last week, 94% at this time last year, and 97% for the 5-year average. About 40% of the crop has bolls opening, compared with 24% at this time last week, 15% at this time last year, and 25% for the 5-year average. The condition of the crop was described as 2% excellent, 49% good, 42% fair, 7% poor, and 0% very poor. These are observed/perceived state-wide averages.

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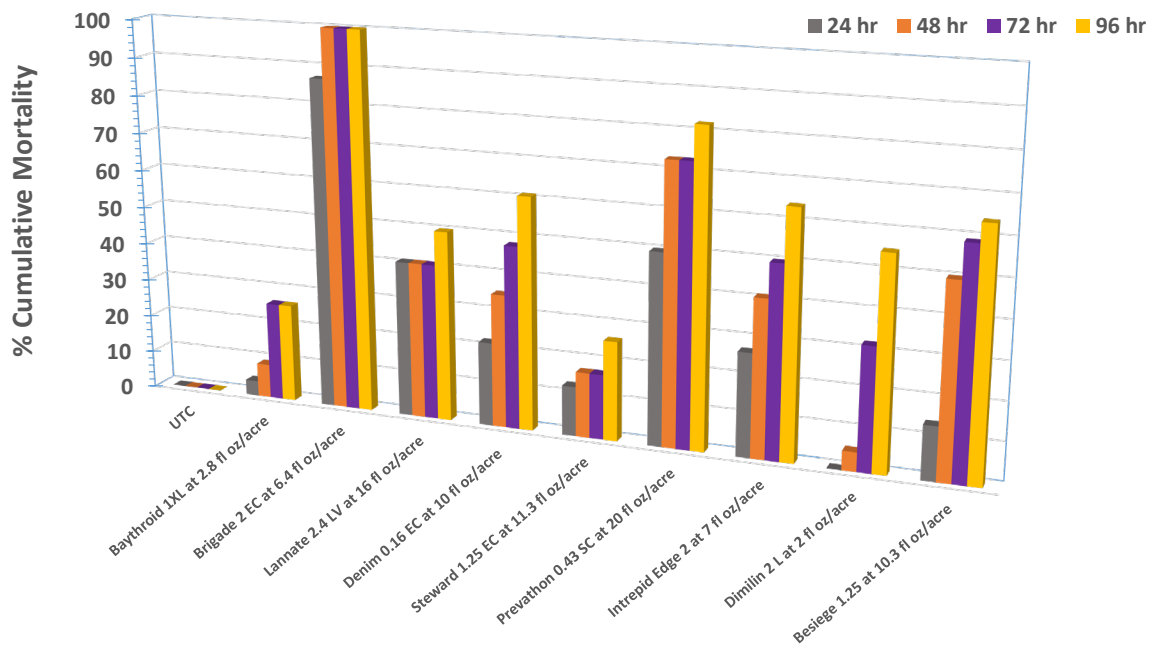
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yet. You should know how to identify your moths, as I push that skill each week with the photos of larvae and adults (moths) by species. As I mentioned last week, a recent population of VBC showed up in a field of soybeans in Elloree, SC, in large numbers and almost defoliated the field in a few days. A pyrethroid was used twice on the field, but many VBC survived the applications. This is very unusual, as VBC are typically very sensitive to just about any insecticide, especially the pyrethroids. VBC does not overwinter in SC, so the population came from somewhere south of SC. Apparently, this field experienced a population that was somehow selected to be resistant to pyrethroids. Some of my colleagues around the country have experienced this before, and it is always an isolated incident that does not repeat regularly. As I mentioned, VBC are migratory, so we get what we get on populations and resistance. We screened some of these VBC larvae in a topical bioassay to compare various insecticides. The results are shown below. For some reason, the population appeared to tolerate cyfluthrin (Baythroid, Tombstone, etc.) but was susceptible to bifenthrin (Brigade, Discipline, etc.), both pyrethroid insecticides – a real head scratcher. Other than bifenthrin, all materials provided less than 50% control at 24 hr after topical treatment in the laboratory, although, control was improved with all products by 96 hr after application. To be fair, some materials in the bioassay provide control via contact and ingestion activity, so the ingestion portion of the insecticide does not get a “fair shake” with this topical approach. However, contact efficacy did indicate that the maximum rate of bifenthrin was superior to the products tested. I do not expect to see widespread resistant VBC next season. This should be something we see this season and not again for a while.

Velvetbean Caterpillar Laboratory Bioassay – SC (2019)



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Treatment thresholds (per rowft) for insects sampled with beat cloth.

Pest	Row width (inches)				
	38	30	21	14	7
stink bug	1	0.8	0.5	0.3	0.2
corn earworm*	2	1.6	1.1	0.7	0.4
velvetbean caterpillar	4-6	4	2.7	1.8	0.9
soybean looper	6-8	5.5	3.8	2.6	1.3

*this is the pod-feeding threshold for corn earworm

Treatment guidelines for soybean insects sampled with a sweep net.

Pest	Number per 10 sweeps	Comments
stink bug	1-2	
corn earworm	3	or 15% foliage loss
velvetbean caterpillar	10	or 15% foliage loss
soybean looper	15	or 15% foliage loss
kudzu bug	10 (nymphs)	1 nymph per sweep

For other foliage feeders use a threshold of 30% defoliation before first bloom, 15% after first bloom.

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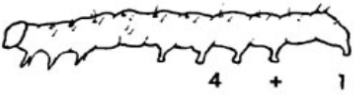


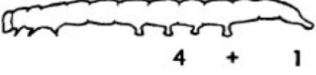








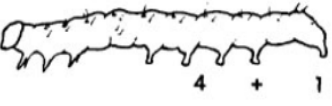



The pictures below will help you identify damaging caterpillars and the moths that deposit the eggs from which the larvae hatch. Being able to recognize the moths is a great skill to have, as it will let you know what to expect in the coming days when eggs are deposited and start hatching. Know these major species:

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(2017) Prepared by Jeremy Greene, Professor of Entomology

FIELD KEY TO COMMON SOYBEAN CATERpillARS

	 4 + 1	<p>CORN EARWORM 4 + 1 pair prolegs Curls up in hand Black "warts" on body</p>	
	 4 + 1	<p>VELVETBEAN CATERPILLAR 4 + 1 pair prolegs Very active when handled</p>	
	 2 + 1	<p>SOYBEAN LOOPER 2 + 1 pair prolegs Fatter at tail end Looping movement</p>	
	 3 + 1	<p>GREEN CLOVERWORM 3 + 1 pair prolegs Not fatter at tail end Looping movement</p>	
	 4 + 1	<p>TOBACCO BUDWORM 4 + 1 pair prolegs Curls up in hand Black "warts" on body</p>	

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Bollworm & Tobacco Budworm



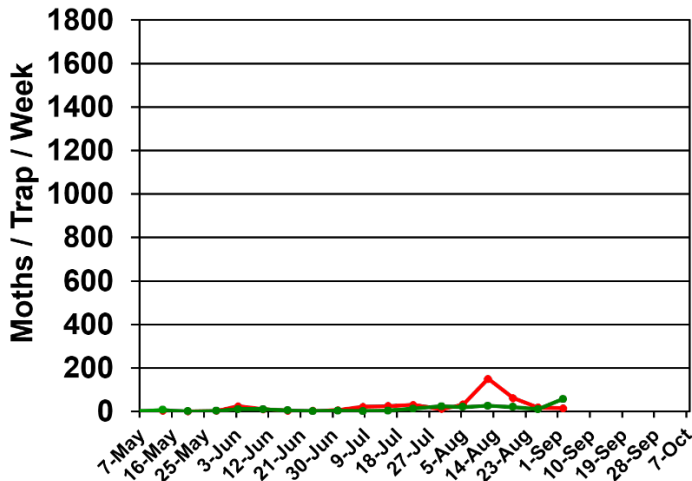
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2018 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

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.

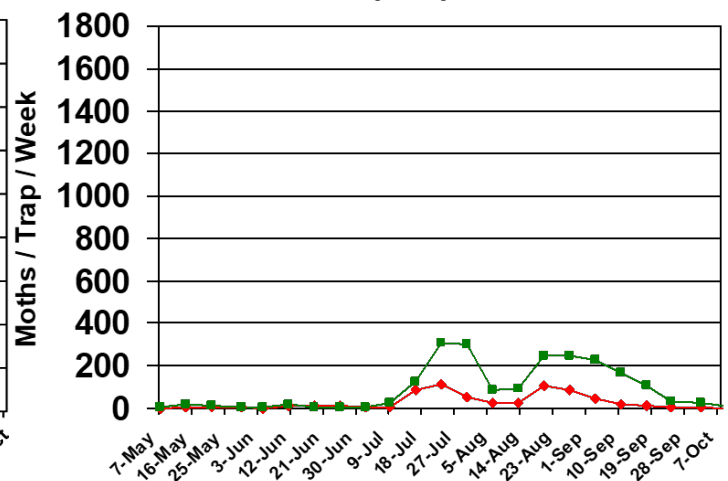
—●— TBW
—■— BW



Pheromone Trap Capture SC - 2019

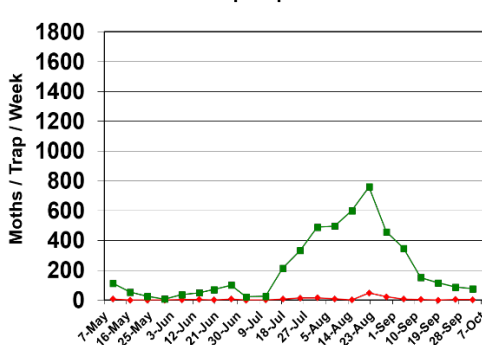


Pheromone Trap Capture SC - 2018

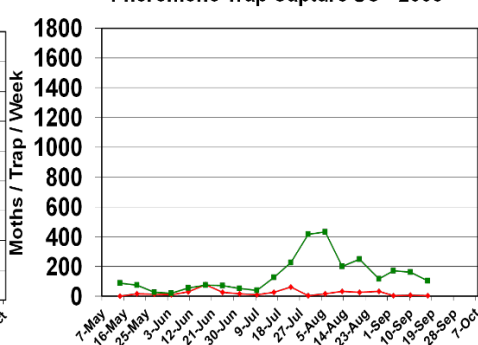


Trap data from 2007-2017 are shown below for reference to other years of trapping data from EREC:

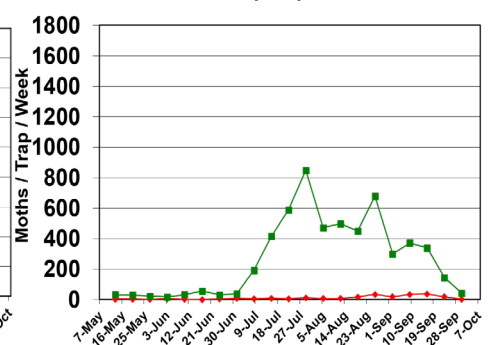
Pheromone Trap Capture SC - 2007



Pheromone Trap Capture SC - 2008



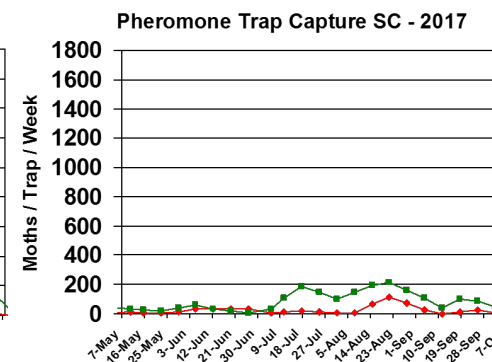
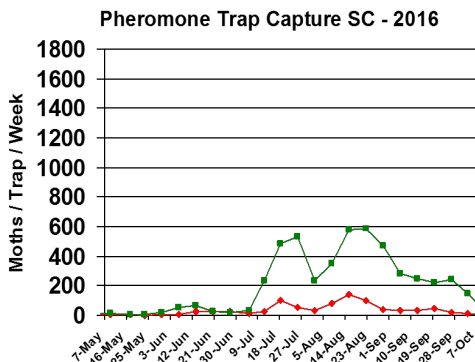
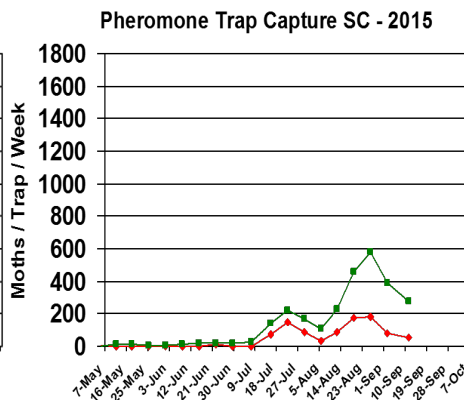
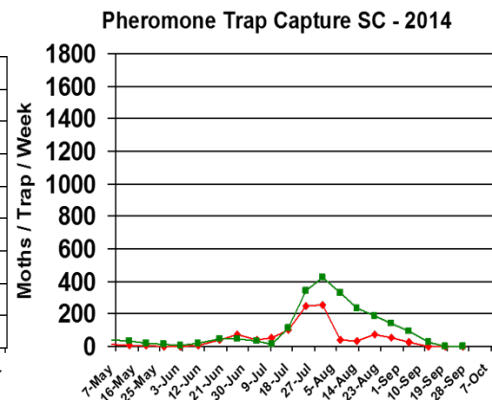
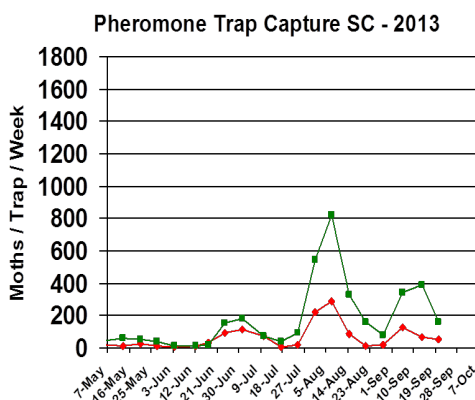
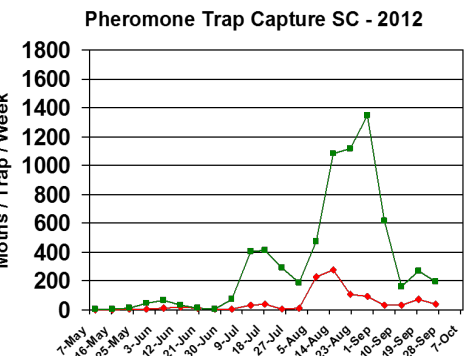
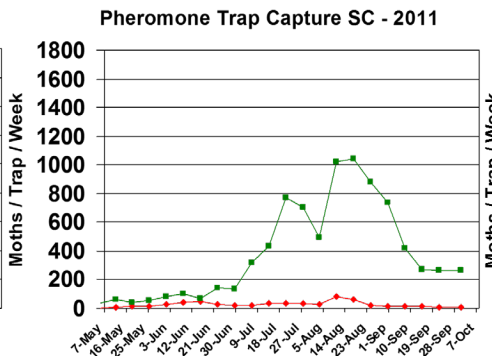
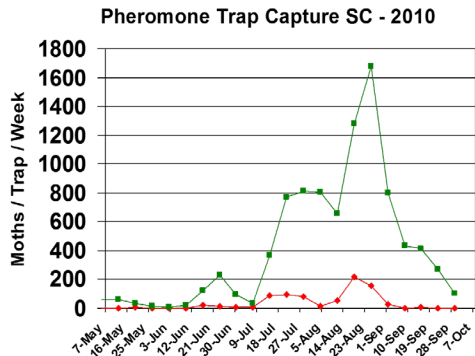
Pheromone Trap Capture SC - 2009



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Pest Management Handbook – 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>

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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



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