



## Cotton/Soybean Insect Newsletter

Volume 17, Issue #6 Edisto Research & Education Center in Blackville, SC

10 June 2022

### Pest Patrol Alerts

There was a disruption in texts being sent out recently, so, if you have not received text alerts from me 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 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 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

**Charles Davis**, county agent in Calhoun County, reported, “I didn’t make it into any squaring cotton this week, but I did drive down a grassed waterway between cotton fields yesterday and thought I was in a locust movie. The cotton seemed to be holding on well, but most of the volunteer peanuts got fried last week, so if there wasn’t something in the tank for the hoppers, things might get dicey in the cotton field.”

**Jonathan Croft**, county agent in Orangeburg County, also reported seeing a lot of grasshoppers again this week.

### Cotton Situation

As of 5 June 2022, the USDA NASS South Carolina Statistical Office estimated that about 92% of the crop has been planted by this week, compared with 81% planted the previous week, 89% at this time last year, and 89% for the 5-year average. About 1% of the crop is squaring, compared with 0% the previous week, 0% at this time last year, and 2% for the 5-year average. The conditions of the crop were 1% excellent, 50% good, 49% fair, 0% poor, and 0% very poor. These are reported statewide averages.

### Cotton Insects

Most of our cotton crop is safe from thrips now, except for areas in the Piedmont or upper Pee Dee regions of the state, where the thrips risk model indicated some elevated risk for planting dates into late May. So, most of our focus should now shift to plant bugs, aphids, and spider mites. If you look at the timeline chart

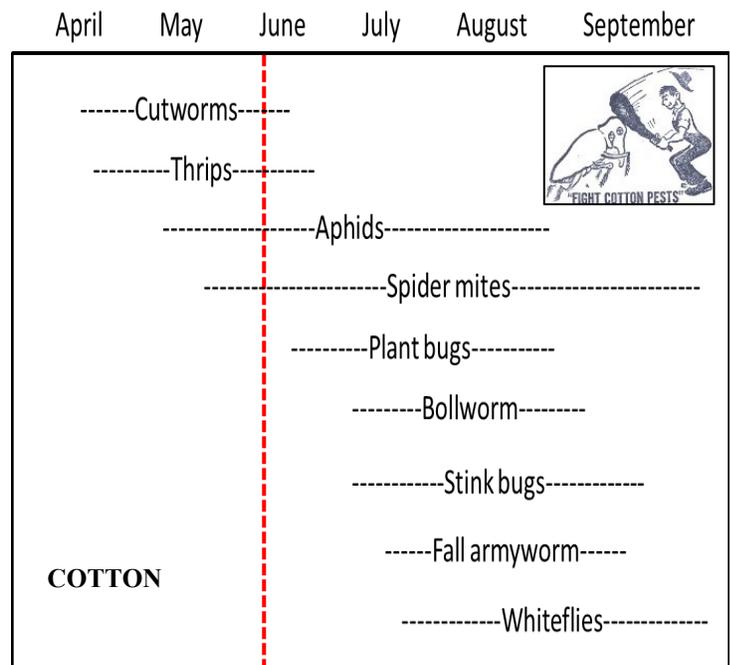
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shown here, we are right on track with aphids and spider mites, with plant bugs soon an issue. Spider mites can be an problem in fields where any late sprays of acephate were applied for thrips. In addition to those late applications not paying for themselves, you can flare spider mites with acephate, if you spray too late for thrips. Once cotton is past 4 or 5 true leaves, most data indicate that any sprays for thrips are a waste of money, and you run the risk of releasing spider mites from natural controls. We have materials recommended in the Pest Management Handbook for control of spider mites. If you didn't know this cool fact, gluphosinate (Liberty) herbicide will actually kill spider mites. So, if you are spraying cotton with gluphosinate to kill volunteer peanuts and weeds, you will get some benefit on killing spider mites also. This is not a labeled and recommended use of the herbicide, but it will kill or suppress populations of the two-spotted spider mite, the predominant species that causes problems in cotton.



Plant bugs are the most important insect species to scout for now in cotton, especially if it was planted in April or early May, and you have squares on the plants. This early cotton serves as an early season bottleneck for the tarnished plant bug (TPB), *Lygus lineolaris*, our predominant and most important species of Miridae (plant bugs). The sweep-net threshold for TPB in cotton is 8 bugs/100 sweeps. Some of our counts were as high as 116 bugs/100 sweeps this week, but all counts ranged between 0 to 116 bugs/100 sweeps. Most of the counts in these early planted trials were above threshold, so I sprayed treatments this week. This does not represent all of our cotton, but any that was planted early should be swept for adults, and the square retention should be measured also. Most of our square retention counts were good this week, but I expect lower numbers next week because of the high numbers of adults found this week. The true test will be to see what plots develop high populations of nymphs. Here are a couple of photos of the adults of TPB to look out for in sweep-net samples right now.



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Treatment thresholds for plant bugs are based on square retention AND plant bugs both being present at threshold levels. There can be significant physiological shed of squares due primarily to the environment. If the weather is causing shed, we do not want to waste time and money on spraying for something that is not there at economic levels. 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 Pest Management Handbook or below for recommended insecticides.

<b>PLANT BUGS (COTTON FLEAHOPPER AND TARNISHED PLANT BUG)</b>						
<b>Product</b>	<b>Product/acre</b>	<b>Lb ai/acre</b>	<b>Acre/gal</b>	<b>REI</b>	<b>PHI</b>	<b>Comments</b>
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 suppression 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.

Proper identification of insects in the field is important. Check out the newsletter from last week, if you missed it. I included side-by-side photos of TPB, bigeyed bugs, and false chinch bugs. When those fly quickly out of a sweep net, they can look similar with just a glance. We will continue to cover plant bugs for the next few weeks, and we will talk more about aphids, the virus they have been transmitting in recent years, and potential circumstances (rare cases) where yield losses might occur due to aphids.

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**Soybean Situation**

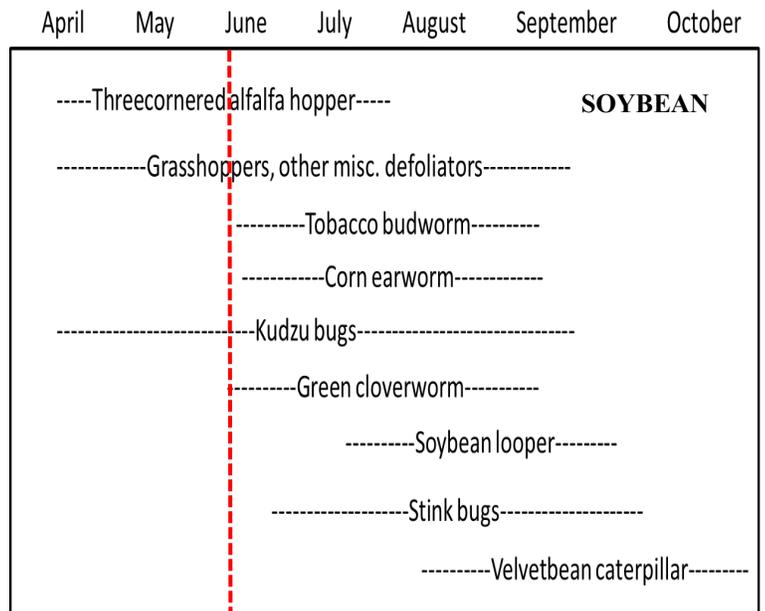
As of 5 June 2022, the USDA NASS South Carolina Statistical Office estimated that about 67% of the crop has been planted this week, compared with 49% planted the previous week, 82% at this time last year, and 62% for the 5-year average. About 40% of the crop has emerged, compared with 23% the previous week, 68% at this time last year, and 43% for the 5-year average. The conditions of the crop **(have yet to be reported)** were --% excellent, --% good, --% fair, --% poor, and --% very poor. These are reported statewide averages.

**From the SC Soybean Specialist (Dr. Michael Plumblee)**

“Soybean planting has quickly progressed over the last week, where rainfall has occurred. Hot, dry conditions continue for much of the state, though some places have been receiving a few pop-up showers to keep soil moisture levels adequate. In times of dry conditions keep an eye on fields that may not have received rainfall or irrigation to activate PRE herbicides. Our earliest planted soybeans (late March) have started to put on blooms, R1-R2 growth stage (bloom) is one of the most water-sensitive growth stages in soybean, if irrigation is available ensure that the soybeans are not water-stressed at this time.”

**Soybean Insects**

Other than grasshoppers being very numerous across the state, problems with insects are sparse. Use a heavy rate of a pyrethroid mixed with Dimilin (2 fl oz/acre) for fields with big infestations of grasshoppers. We are also starting to see kudzu bugs and threecornered alfalfa hoppers in some early soybeans, and that matches with our timeline chart here. We will soon enough see some moths and caterpillar pests, so refresh your skills in identifying the moths of important species. We usually see the green cloverworm first.



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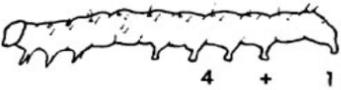
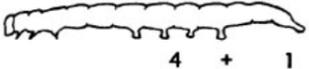
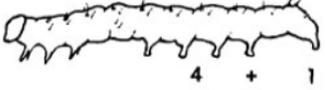


The figure below is for much later in the season, but it stays here as a reminder to learn how to identify larvae and adults (moths).

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.

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 (2017) Prepared by Jeremy Greene, Professor of Entomology

### FIELD KEY TO COMMON SOYBEAN CATERpillARS

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

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## Bollworm & Tobacco Budworm

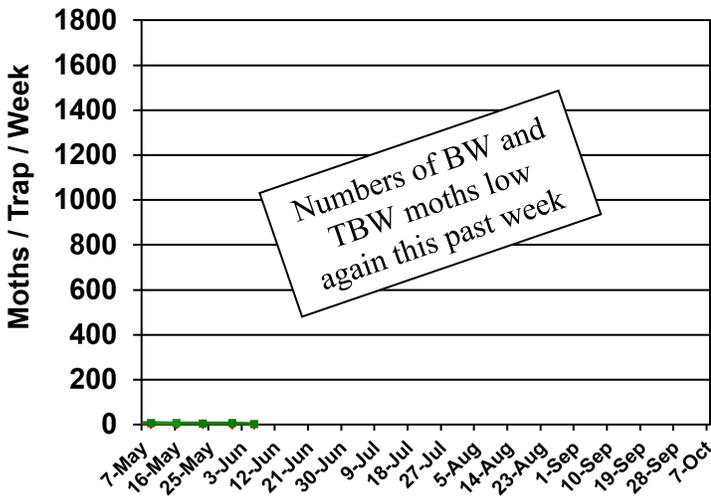


Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2020 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these

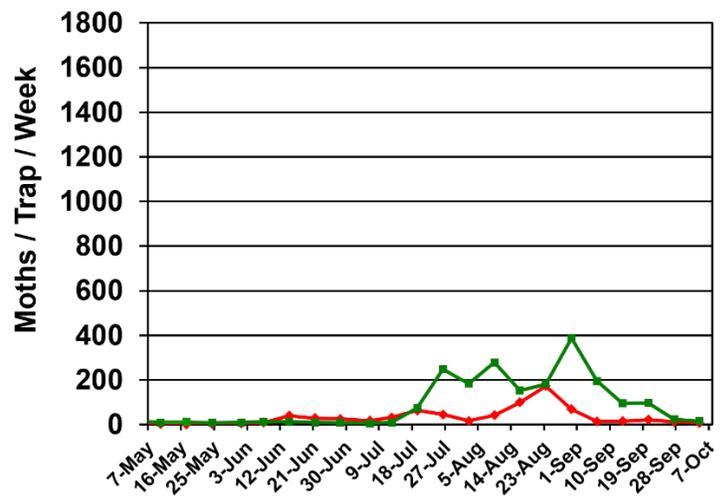
data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.



### Pheromone Trap Capture SC - 2022

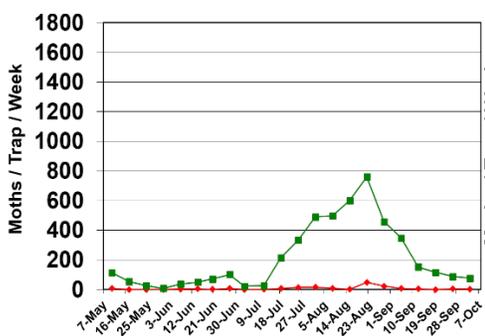


### Pheromone Trap Capture SC - 2021

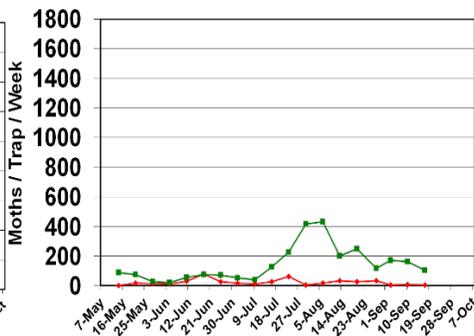


Trap data from 2007-2020 are shown below for reference to other years of trapping data from EREC:

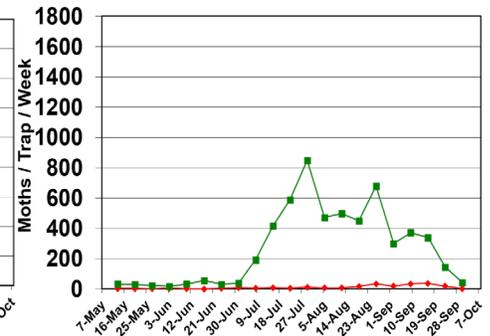
### Pheromone Trap Capture SC - 2007



### Pheromone Trap Capture SC - 2008



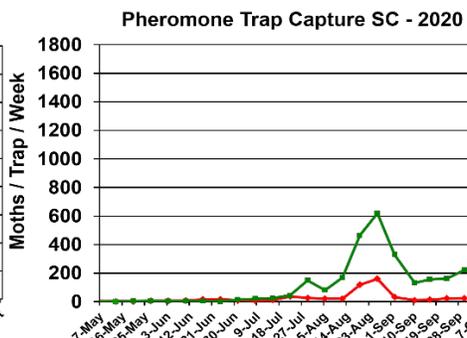
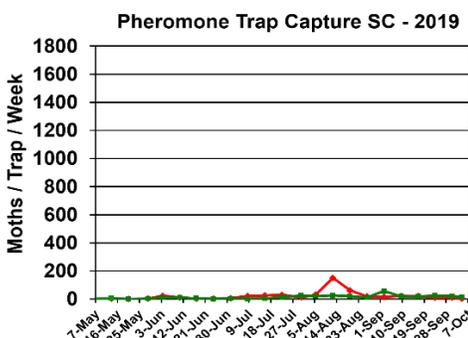
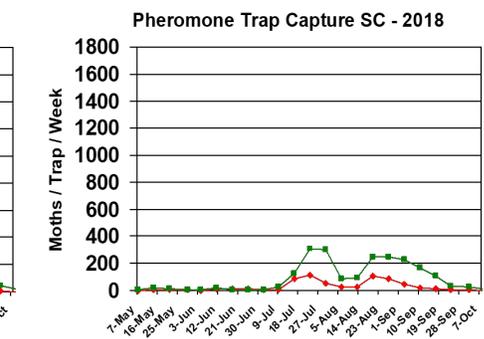
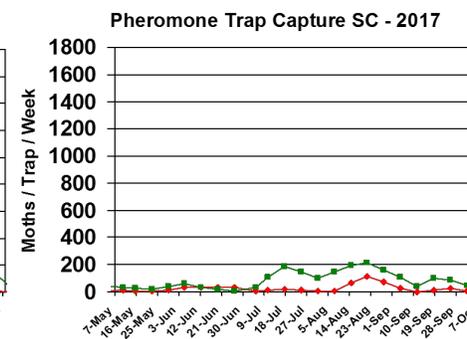
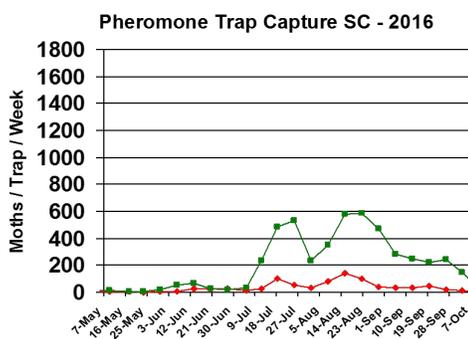
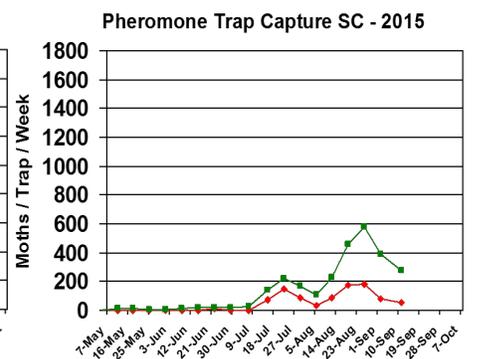
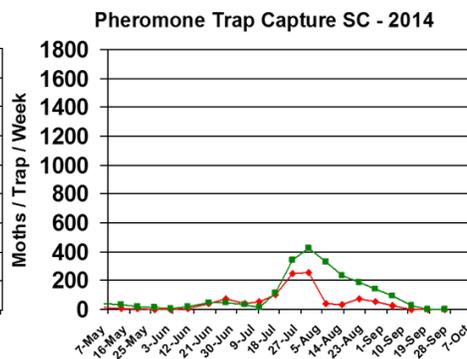
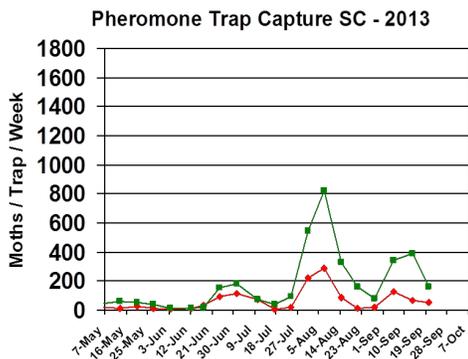
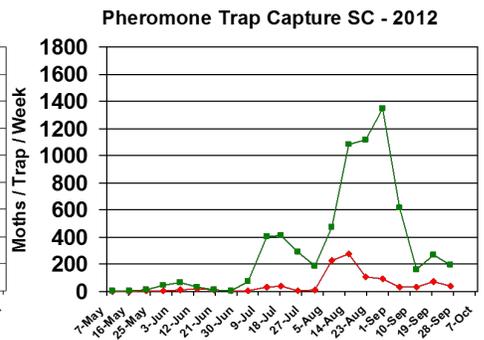
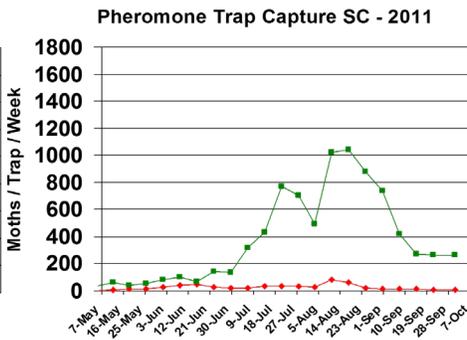
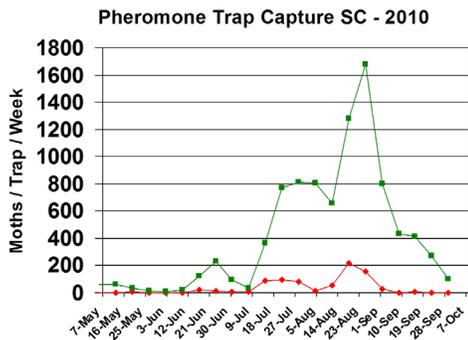
### Pheromone Trap Capture SC - 2009



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### **Pest Management Handbook – 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:  
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