Pest Patrol Alerts
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 on Twitter.

News from Around the State
James Thomas and Fleming McMaster, local crop consultants, reported large populations of velvetbean caterpillar in peanuts and soybeans, respectively, much earlier than usual. Collins Gardner, consultant in the Pee Dee Region of SC, reported that the egg lay he is seeing from bollworm in cotton is some of the heaviest that he has ever seen and that he is seeing some feeding on bolls that is seemingly killing the larvae, but after enough damage to also kill the bolls. Jonathan Croft, county agent in Orangeburg County, reported seeing stink-bug injury to bolls at threshold in cotton this week and getting reports of kudzu bug nymphs and seeing SBL, VBC, GCW, and defoliation on soybeans, indicating thresholds met in select locations. William Hardee, county agent in Horry and Marion Counties, reported threshold numbers of stink bugs in soybeans at early pod (R3), with building numbers of podworms.

Scouting Workshops and Upcoming Field Days
Our scouting workshops were a great success last week. A big ‘thank you’ goes out to our county agents (David DeWitt, Jonathan Croft, Charles Davis, Marion Barnes, and others) who made the workshops happen. Thanks also to Drs. Anco and Marshall for participating in the workshops. We will provide information on upcoming field days in subsequent issues of the newsletter. Stay tuned! 😊
**Cotton Situation**

As of 31 July 2022, the USDA NASS South Carolina Statistical Office estimated that about 94% of the crop is squaring, compared with 90% the previous week, 93% at this time last year, and 87% for the 5-year average. About 70% of the crop is setting bolls, compared with 64% the previous week, 65% at this time last year, and 55% for the 5-year average. The conditions of the crop were 14% excellent, 61% good, 20% fair, 5% poor, and 0% very poor. These are reported statewide averages.

**Cotton Insects**

**Aphids** – Cotton aphids can rebound to some degree after an epizootic, but they usually become mostly “background” insect pests after the fungus regulates their initial population explosion. They will continue to be present and serve as food for beneficial arthropods. The decimation of cotton aphids by the aphid fungus *Neozygites fresenii* was as quick this season as I have ever observed it, and this is my 30th year of working in cotton. A couple of consultants with more seasons under their belts told me the same...fastest they have seen the fungus work. This is why I say don’t spray most populations of aphids in cotton.

**Plant bugs** – We are in stink bug month (August) now, and most of our crop has bolls and is susceptible to injury from stink bugs now. Insecticides used for stink bugs will also control plant bugs, so we are pretty much done with dedicated scouting for plant bugs, if you are past the 2nd week of bloom and managing stink bugs using our dynamic boll-injury threshold.

**Spider mites** – It got hot and dry again, and spider mites have been hard at work. I observed some cotton with stippling on the leaves today, indicating that spider mites have been active. However, it was difficult to see eggs and active colonies of spider mites, but they are out there. If we can just get some regular rainfall events, our problems with spider mites will be minimal. Keep looking for signs of feeding by spider mites.

**Bollworm** – Captures of bollworm moths in our pheromone traps were high at the end of July before declining again, but there are more moths in the field each day. Oviposition by females is increasing, and we should see pressure intensify in the next couple of weeks. Any cotton planted later in the planting window (late May or in June) will be at increased risk from bollworm. Cotton with three Bt genes is better protected from bollworm than two-gene Bt cotton, for sure, but it is not immune to escapes and some injury. Check two-gene Bt cotton.
for bollworm thoroughly. Right now, bollworms are ravaging a couple of trials I have in non-Bt cotton and really putting the foliar materials to the test. I will spray that trial again next week, and we will keep counting it to generate data on what to expect from insecticides on controlling bollworm.

**Stink bugs** – Stink bugs are in the field damaging bolls and reproducing. Egg masses are easy to find on untreated cotton that have had bolls for a few weeks, so make sure you know what week of bloom you are in for each field you manage. Anything planted early (end of April and early May) has been susceptible for weeks, and any fields planted later (end of May or in June) are in the early stage of susceptibility but are more at risk for injury from stink bugs. Any fields planted late in the planting window are generally more at risk from bollworm, stink bugs, etc. Use the dynamic boll-injury threshold to manage stink bugs appropriately. The figures below and the information on the following page detail that procedure.

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**Public Service Activities**

The mention of any commercial product in this publication does not imply its endorsement by Clemson University over other products not named, nor does the omission imply that they are not satisfactory.
SCOUTING FOR STINK BUG DAMAGE IN SOUTHEAST COTTON: Description and Use of a Pocket Scouting Decision Aid

Cotton grows in the Southeast can use a pocket-size scouting decision aid to assess and manage stink bug damage based on thresholds for different cotton growth stages.

STINK BUG SCOUTING DECISION AID

A pocket-size scouting decision aid was developed for use in the Southeast to encourage (1) enhanced adoption of stink bug scouting in cotton, (2) better field identification of stink bug-induced boll damage symptoms, and (3) use of recommended scouting procedures. This publication describes the decision aid and how to use it. The aid relies on the latest dynamic threshold for stink bugs in cotton based on week of bloom. It provides the following scouting aids:

- A “dynamic threshold by week of bloom” table,
- Recommended scouting procedures,
- Measuring holes to help select the correct boll size range for damage assessments, and
- Images of internal and external stink bug-damaged boll damage.

The aid should greatly improve stink bug management because the dynamic threshold is based on the cotton growth stages when the crop is most susceptible to stink bug damage. It relies on lower thresholds during weeks of maximum susceptibility (weeks 1 through 5 of the bloom period) and higher thresholds during stages of lower vulnerability (weeks 6 to 9 of the bloom period).

DESCRIPTION AND USE

The front (Figure 1) side of the 3x3-inch decision aid provides recommended scouting procedures.

- Select a random sample of the correct size bolls.
- Assess an adequate number of bolls.
- Sort the bolls into two piles, those with and those without obvious external damage lesions.
- Crack bolls between the thumb and forefinger or cut them open with a knife and inspect all internal boll wall surfaces for internal warts (not just areas visible from the internalscoring from the internal knife cut), and examine all bolls for stained lint. (Helpful hint: crack and inspect bolls with obvious external lesions first to determine if the internal damage threshold is met, as bolls with external lesions are more likely to be damaged internally; assessing these bolls first can save time.)
- If the threshold is not met, check the remaining bolls for internal damage.
- Treat only if the threshold has been met for that week.

Figure 2. Reserve side of aid showing external and internal stink bug damage symptoms.

The measuring holes provide an efficient way to select correctly sized bolls. Cotton scouts should target bolls with an outside diameter between 0.9 to 1.1 inches. Bolls of this size correlate best with recent stink bug damage.

The front side also lists the recommended dynamic threshold by week of bloom. The thresholds for weeks 4 and 5 of the bloom period permit mimes in scouting recommendations by the various southeastern states.

The reverse side of the aid provides images to help properly identify stink bug damage: internal warts, and stained lint; and external damage lesions (Figure 2). As explained in recommendation 5 above, external damage symptoms may be used to sort the pulled bolls into two groups.

Each decision aid is fitted with a lanyard that can be worn around the scout’s neck. The lanyard has a quick disconnect adjacent to the aid for removing the aid to size bolls.

RESOURCES

For stink bug scouting details and additional cotton insect management information, see these Web sites:

- North Carolina State University: http://pubs.ext.ncsu.edu/cotton/insecticides/
- Virginia Tech: http://web.entnmt.vt.edu/pteam/pjpp/projectID=22
- Clemson University: http://www.clemson.edu/extension/cottongrowers/cotton/
- University of Georgia: http://uga.cotton.com

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**Soybean Situation**
As of 31 July 2022, the USDA NASS South Carolina Statistical Office estimated that about 53% of the crop is blooming, compared with 49% the previous week, 58% at this time last year, and 42% for the 5-year average. About 23% of the crop is setting pods, compared with 14% the previous week, 15% at this time last year, and 12% for the 5-year average. The conditions of the crop were 13% excellent, 56% good, 28% fair, 3% poor, and 0% very poor. These are reported statewide averages.

**From the SC Soybean Specialist (Dr. Michael Plumblee)**
Michael stated that we generally need rain and attention to insects now in soybeans. I agree with him, especially on the insect part!

**Soybean Insects**
We are now in “worm” season in soybeans. There are a lot of soybean looper (SBL) moths laying eggs and larvae hatching out in soybeans right now. One tip – if you are using a shake cloth to count caterpillars, do an initial look at the cloth for the large caterpillars, but wait a minute before shaking off the cloth and moving on to the next sample. The cloth will “come alive” with very small caterpillars, if you are patient. You really need to be able to detect these small caterpillars. If you don’t have enough large caterpillars to justify a spray, you might on the very small ones. Look closer and longer for the small ones.

Also, we have more reports of velvetbean caterpillar (VBC) in the southern portion of the state. With each passing day, there are more reports of SBL and VBC in soybeans, so “worm” season is here. It is a little early for VBC, but reports of numerous VBC larvae in peanuts and soybeans mean that these migratory species are here. These two important species do not successfully overwinter in South Carolina and must move into our state each season from southern latitudes.

Also, kudzu bugs are numerous in many soybean fields, so be sure to check for reproduction. When you easily spot nymphs on most observations, you likely have enough to justify spraying. Because kudzu bugs only have a couple of generations per year, we can target reproducing populations and control them efficiently.

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Look for moths as you walk soybean fields. If you sharpen your skills on identifying the moths in the field, you will know what species are going to cause problems when the eggs hatch. Study up!

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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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:

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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/pestmanagement2022/2022pmhmaster.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

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