

July 2017

Ag News

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The mention of brand names does not imply endorsement, nor discrimination against similar products not listed. Users are responsible for complying with regulations and label instructions.

Off the Top...

Pesticide Credit Opportunities

Cotton and Soybean Scouting School...

A Cotton and Soybean Scouting School will be held on **Friday, July 28, 2017 at 1:00 PM**. The class will meet in the auditorium of the J. W. Faison Building. After slides and discussion, the group will move to the field.

Two hours of Pesticide credit will be available for Ag-Pest plant, Research and Demonstration, Dealer and Private Applicators. **'N O D X' credits available.**

Pesticide Recertification Classes

August 22 – J W Faison Auditorium
3:00 PM-5:00 PM; and
6:00 PM – 8:00 PM - two hours of
pesticide credits "V" for private pesticide
applicators.

Upcoming Events...

July 28 – Cotton and Soybean Scouting School
See above
August 10 – Bertie County On-Farm Tour –
See page 4.
August 22 – Pesticide Recertification – see
above.
August 29 – Northampton County Field
Trial Tour. See page 4.
September 7 – Peanut Field Day in Lewiston

Persons with disabilities and persons with limited English proficiency may request accommodations to participate by contacting R. Craig Ellison, County Extension Director, at telephone # 252-534-2711, craig_ellison@ncsu.edu, fax # 252 534-1827, or in person at the County Extension Office at least seven (7) days prior to the event.

Stink Bugs on Cotton....



Upcoming quarter-sized boll assessments for internal damage from stink bugs should ideally begin within a week or so of bloom initiation. Pre-blooming cotton should not be in need of protection from stink bugs, and sprays during the first two weeks of bloom should be the exception. Be sure to place an emphasis on weeks three through six of bloom, as research conducted here and in South Carolina and Georgia suggests that this may be the period of maximum exposure to possible yield losses from stink bugs. Generally, earlier planted cotton fields tend to have higher initial stink bug levels than later planted, less mature cotton fields. The reverse is true later in the season when the later planted, less mature cotton fields, are more vulnerable.

Suggested threshold based on most recent research

First week of bloom	50% damage bolls
Second week of bloom	30% damages bolls
Third – fifth week of bloom	10% damage bolls
Sixth – week of bloom	20% damage bolls
Seventh week of bloom	30% damage bolls
Eighth week of bloom	50% damage bolls

Thresholds – Plant Bugs

Post-bloom: 0 to 6 percent dirty blooms – no additional scouting for plant bugs is indicated for 5 to 7 days. Count any brown anthers as damaged. These “thresholds” should be used along with other assessments, if indicated. Higher dirty bloom levels indicate need for additional assessments (ground cloth).

10 to 50 percent initial internal damage to quarter-sized bolls based on week of bloom, as part of stink bug sampling.

2 to 3 adults and medium to large nymphs/5 row feet with a beat cloth (ground cloth).

Be Prepared to Spray Bollworm in Bt Cotton During 2017 – Written by Dr. Dominic Reisig, Entomology and Plant Pathology, NC State University

Bollworms are abundant again during 2017. Many survived the winter and emerged early. This could mean trouble for cotton, since we have the potential to crank out an additional generation, and since most of our cotton is late this year. Furthermore, we are seeing as many, or more breakthroughs in Bt corn this year compared to last. Bollworms that are produced in Bt corn are adapted to survive on Bt cotton. One bright spot is that plant bug pressure has been relatively light compared to previous years. If we can avoid spraying insecticides prior to a bollworm flight, we can preserve some of the natural enemies that help us ward off bollworm infestations. Another bright spot is that we have more cotton acres relative to corn this year. But with close to one million corn acres in the state, there are going to be a lot of moths moving from corn into cotton during July and possibly even persisting into September.

Cotton growers should enter bollworm season with a plan and be prepared to spray Bt cotton if they want to preserve yield. Bollgard II, TwinLink, and WideStrike are most at risk. The few acres planted to Bollgard 3, TwinLink Plus, and WideStrike 3 will only need sprayed under the most extreme pressure situations. There are two strategies that growers can take. While both have benefits and costs, both rely heavily on good scouting for proper implementation.

1) Preventative strategy:



Bollworm egg on leaf.

Begin scouting cotton leaves and squares (focusing on bracts) for eggs starting mid-July. You can keep an eye on when flights are happening by using our light trap site located at (<https://cotton.ces.ncsu.edu/trap-data/>). Eggs are small and take a sharp eye to spot. Unfortunately, bollworm and tobacco budworm eggs are difficult to tell apart. This is important because tobacco budworm is 100% controlled by Bt cotton. Although tobacco budworm is more abundant this year than during 2016, to play it safe, assume it's a bollworm egg. You can also pay attention to moths that you flush in the field. Look for the double chevron on the wings of budworm in contrast to the single dot on bollworm wings.



Corn earworm moth left. Tobacco budworm moth right. Bollworm egg on leaf. Photo credit Clemson University – USDA Cooperative Extension Slide Series, Bugwood.org

Eggs can be laid on any plant part and sampling the entire plant can be challenging. Recent research conducted in NC during 2016 found that eggs are laid throughout the plant, but are most common on leaves and squares, especially near blooms. If there are 25 eggs on 100 terminals, stems, or fruit (squares/blooms/bloom tags/bolls), and if stink bugs or plant bugs are not an issue, apply Prevathon. If stink bugs or plant bugs are an issue, apply Besiege (note that this will kill more beneficials compared to Prevathon). **Do not use this strategy if eggs have hatched and 2nd instar larvae are present.** Also, this strategy will provide the most return for Bollgard II, TwinLink, and WideStrike; expect less return for Bollgard 3, TwinLink Plus, and WideStrike 3 (which are pretty effective for bollworm thanks to the Vip protein

2) Reactive strategy:

Our tried and true threshold for bollworms in Bt cotton is based on a scouting procedure focused on finding 2nd instar larvae (<https://cotton.ces.ncsu.edu/insect-scouting-guide/>). The huge advantage to this strategy is that it allows Bt cotton to do its job by killing all the tobacco budworm larvae that are newly hatched from eggs. The problem with this strategy is that it has the potential to let bollworm get a foothold. Once larvae obtain some size (3rd instar or larger) and move into squares and bolls, they are extremely difficult to control. So, like the preventative strategy, the reactive strategy has benefits and costs as well.

To use this strategy, only apply an insecticide when thresholds are reached (three 2nd stage bollworm (or larger) in 100 fruiting tissues on one scouting trip, two 2nd stage bollworm (or larger) in 100 fruiting tissues on two consecutive scouting trips, or one 2nd stage bollworm (or larger) in 100 fruiting tissues on three consecutive scouting trips). You could use any of the insecticides noted for bollworm control in the 2017 N C Ag Chem Manual

<https://content.ces.ncsu.edu/north-carolina-agricultural-chemicals-manual/insect-control> (page 82).

Conventional Cotton—Bollworms and Tobacco Budworms

Prebloom (with Bollgard II, TwinLink, WideStrike, and WideStrike 3 cotton, early season June damage from bollworm and tobacco budworms is essentially nonexistent). On our few remaining acres of conventional cotton, limit a possible treatment to one well-timed application of a nonpyrethroid, such as Blackhawk, Prevathon, Steward, or Denim.

Postbloom: Egg Threshold (after the onset of the major bollworm moth flight)

- 10 or more eggs per 100 terminals. or
- Two to three eggs per 100 fruiting forms.

Larval Threshold (usually after the egg threshold has been employed; but also, used after blooming begins and before major bollworm flight, particularly if tobacco budworms are present).

- Three live worms per 100 fruit (squares, blooms, or bolls).

Transgenic Bt Cotton (used against the major bollworm generations) Larval Threshold Only

- Three second-stage (1/8-inch or larger) bollworms per 100 squares or bolls. Pay particular attention to bollworms in or under yellow, pink, and dried blooms, but sample only in proportion to their occurrence. or
- Two second-stage bollworms (as above) on two consecutive scouting trips. or
- One second-stage bollworm (as above) on three consecutive scouting trips.

Bertie County On-Farm Tour

A tour of research plots at the Peanut Belt Research Station in Lewiston is scheduled for

Thursday, August 10th 2017. Registration will begin at 8:30 a.m. and the tour will begin promptly at 9:00 a.m. and conclude with lunch at noon. Stops on the tour will cover a variety of topics pertaining to the production and management of Sage, Industrial Hemp, Peanuts, Cotton, Corn, and Soybeans. Dr. Keith Edmisten & Dr. Guy Collins, Extension Cotton Specialist; Dr. David Jordan, Extension Peanut Specialist; Dr. Barbara Shew, Extension Peanut Pathologist; Roger Batts, Field Research Director and Scott Tilley, Area Specialized agent are currently planning to participate in the program.

Northampton County Field Trial Tour

The Northampton County Field Trial Tour is scheduled for **Tuesday, August 29, 2017 at 1:30 PM**. Dr. Guy Collins, Extension Cotton Specialist, Dr. Keith Edmisten and Scott Tilley, Area Specialized Agent will be on hand to share and discuss Cotton Variety Characteristics for 2017.

The first plot is located across the road from 2624 Big John Store Road. Directions: Drive North on Peanut Farmers Market Road to Big John Store Road. Turn right onto Big John Store Road. Plot is located 1/3 mile on the right. From there we will travel to other plots of interest.