



Cotton Comments

OSU Southwest Oklahoma Research and Extension Center
Altus, OK



August 10, 2017

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Insect Update

The crop is progressing at very rapid rate. Bollworm infestations were reported in several fields and control applications were made. Plants should be watched closely for bollworms, because until a field is insect-safe and terminated, I cannot overstate the importance of weekly scouting. Aphids are still present in many fields but beneficial arthropods are keeping them under control. A disturbing event occurred this week. An insect was sent to us for identification. This insect was apparently earlier misidentified. The original identification was a cotton feeding stinkbug. However, after closer inspection it was in the stinkbug family BUT it was a beneficial one – a Spined Soldier bug. Various stinkbugs do feed on cotton, but the Spined Soldier bug actually preys on caterpillars and is considered by experienced scouts to be a beneficial insect in cotton. If markings or shapes appear unfamiliar please take the time to properly ID any insect in question. There are several online guides for Cotton insect identification. Texas A&M AgriLife Extension Service has excellent resources such as the Field Guide to Predators, Parasites and Pathogens Attacking Insect and Mite Pests of Cotton ([please click here](#)), and also there is a Cotton Insect Management Guide ([please click here](#)).



Fourth instar nymph of the southern green stink bug, *Nezara viridula* L. Photograph by Herb Pilcher, USDA-ARS



Photograph provided by local scout of suspected pest recently found in local field, actually a Spined Soldier bug nymph.



Nymph of the Spined Soldier bug (Photo by R. Bessin, 2000)

Stink Bugs

Stink bugs in Oklahoma cotton were not a concern until the advent of Bt varieties. Transgenic Bt cotton resulted in fewer insecticide applications for control of lepidopterous pests and soon after, stink bugs were occasionally noted as damaging pests. Although not typically found in economically damaging populations in most southwestern Oklahoma fields, some areas do have issues.



Green Stink Bug

Photo courtesy <http://stinkbugsguide.net/>



Conchuela Stink Bug

Photo courtesy of University of California



Brown Stink Bug

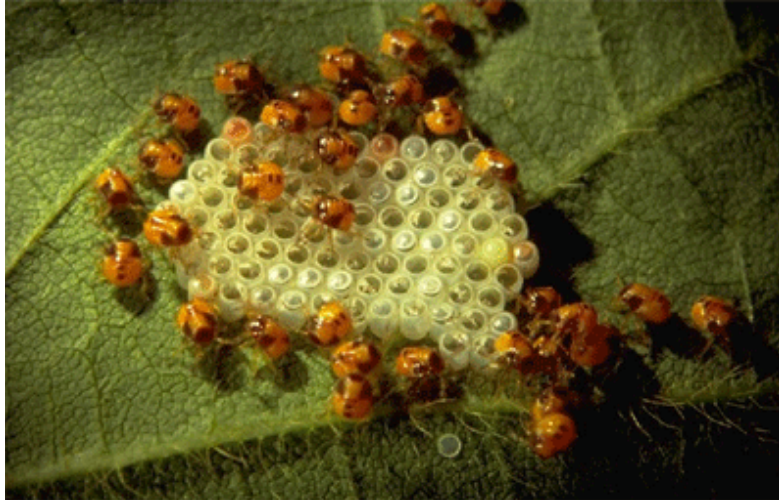
Photo courtesy <http://stinkbugsguide.net/>

The following information was taken from the Online Texas A&M AgriLife Extension Cotton Insect Management Guide, which is available here:

<http://cottonbugs.tamu.edu/fruit-feeding-pests/stinkbugs/>

This website also provides action thresholds and chemical control suggestions for this pest. Stink bugs are shield-shaped, flat and vary in size around 3/8 to 5/8-inch in length, and are about one-half as wide as their length. While the adult brown stink bug is light brown in color, the green and southern green stink bugs are bright green and similar in appearance. They can be distinguished from one another by color of the bands on their antennae. The southern green stink bug has red bands while the green stink bug has black bands. The conchuela stink bug adult is dark brown to black with a red border and a red spot on the tip of the abdomen. The harlequin bug is primarily a pest of mustards and cole crops and will occasionally infest cotton. Adult stink bugs may live for several weeks. Stink bugs get their name from the foul smelling substance they exude from glands on their thorax. This chemical smell is meant to deter predators and warn other stink bugs of danger. This scent gland also plays a role in females attracting mates.

The reason stink bugs appear to concentrate in one part of the field and not others is due to the female's egg laying habits. A single female may lay 300 to 600 eggs, in clusters of 30 to 80 eggs. Egg clusters appear as rows of pale-green, pink or white barrels laid primarily on the underside of leaves. Eggs will typically hatch in 2 to 4 days under ideal conditions, but may require up 2 weeks when temperatures are cool.



Hatching southern green stink bugs

Photo courtesy Texas A&M AgriLife Extension

Stink bugs have piercing-sucking mouthparts and damage cotton by piercing bolls and feeding on the developing seeds. Their feeding activity usually causes small bolls to abort but can result in dark spots about 1/16-inch in diameter on the outside of larger bolls where feeding occurred. These dark spots do not correlate well with the wart formation on the inside of the boll to be used in scouting. There may be several spots on a boll without internal feeding. The external lesions are associated with wart-like growths on the inner carpal wall where penetration occurred. Seed feeding may result in reduced lint production and stained lint near the feeding site. Stink bugs are also known to facilitate the infection of boll rotting microorganisms. Because of their size, adults and fourth and fifth instar nymphs have the greatest potential for damaging bolls.

Oklahoma generally only has green and brown stink bugs that can cause economic damage in some areas. However all stink bugs are found in Oklahoma. Many products used to control stink bugs can be disruptive to beneficial arthropods, therefore, contact Extension personnel if a question arises.

Field Surveys – Week Ending August 11, 2017

Location	Date of planting	Plant Stage	Insects	Comments
Blaine Irrigated Cotton Inc Enhanced Variety - Schantz	May 26	4.90 NAWF	NONE	GOOD
Blaine Irrigated Dow Innovation - Schantz	May 26	5.75 NAWF	NONE	GOOD
Caddo Irrigated OVT – OSU Caddo Research Station	May 30	4.75 NAWF	NONE	GOOD
Jackson Irrigated DT RACE – Darby	May 15	5.50 NAWF	APHIDS	GOOD
Jackson Irrigated Bayer CropScience APT	May 24	5.25 NAWF	1 Bollworm ¹ 3 Damaged squares	FAIR
Jackson Irrigated OVT – OSU SWREC	May 24	6.00 NAWF	1 Bollworm 2 Damaged squares	GOOD
Jackson Dryland DT RACE - Abernathy	June 7	5.75 NAWF	NONE	FAIR
Jackson Irrigated Cotton Inc Enhanced Variety - Abernathy	May 9	3.75 NAWF	APHIDS	FAIR
Jackson Irrigated Innovation- Abernathy	May 10	4.25 NAWF	APHIDS	GOOD
Jackson Irrigated PhytoGen Innovation Trial – OSU SWREC	May 24	5.50 NAWF	APHIDS	GOOD
Jackson Irrigated Entomology Trials – OSU SWREC	May 8	3.50 NAWF	1 Bollworm 3 Damaged squares APHIDS	FAIR
Tillman Irrigated DT RACE – Nichols	May 12	6.25 NAWF	NONE	GOOD
Tillman Dryland OVT – OSU Tipton Valley Research Center	June 13	7.20 NAWF	NONE	GOOD
Tillman Dryland DT RACE - White	June 12	6.00 NAWF	2 Damaged squares	GOOD

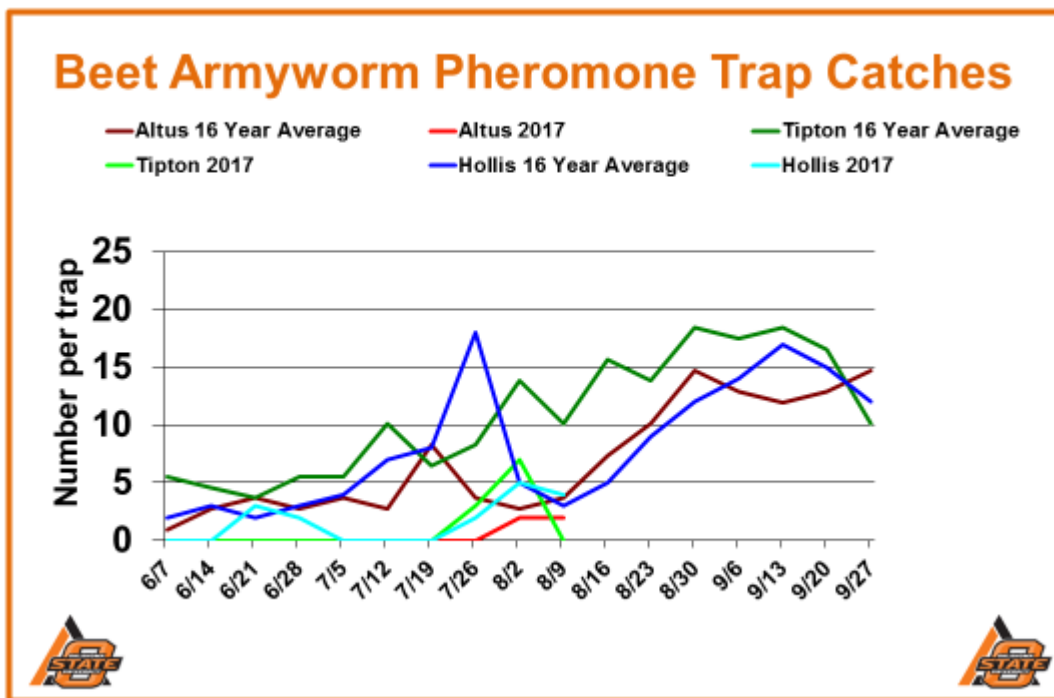
DT RACE – Dicamba Tolerant - Replicated Agronomic Cotton Evaluation Trial (Oklahoma Cooperative Extension)

OVT – Official Variety Trial (Oklahoma Agricultural Experiment Station, Altus, Tipton, Fort Cobb)

APT – Agronomic Performance Trial

¹ Bollworm population and Bollworm damaged squares are based on observations of 100 squares.

Moth pheromone trap data graphs presented below.

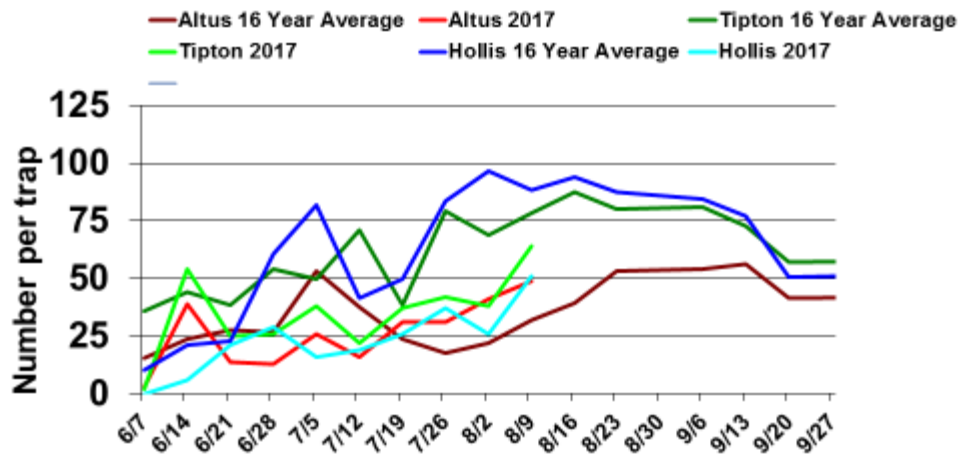


Beet armyworm moth
Photo courtesy of University
of Georgia



Beet armyworm larva
Photo courtesy of USDA

Cotton Bollworm Pheromone Trap Catches



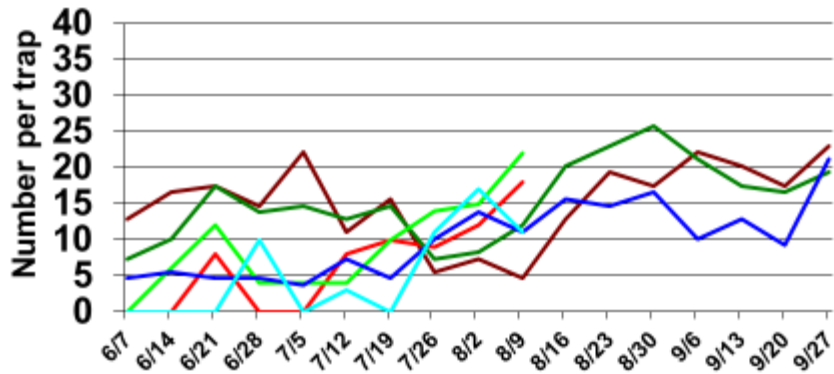
Cotton bollworm moth

Cotton bollworm larva

Photos courtesy of University of Georgia

Tobacco Budworm Pheromone Trap Catches

— Altus 16 Year Average — Altus 2017 — Tipton 16 Year Average
— Tipton 2017 — Hollis 16 Year Average — Hollis 2017



Tobacco budworm moth

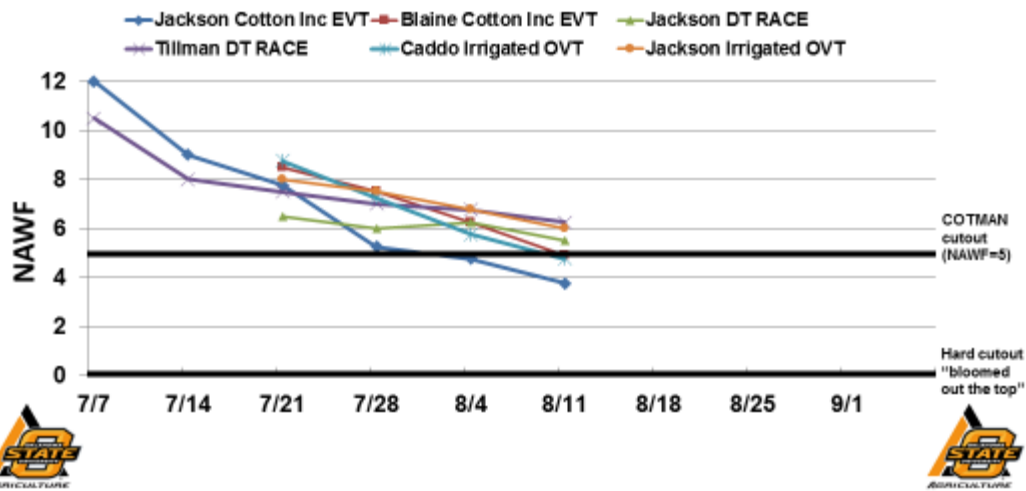


Tobacco budworm larva

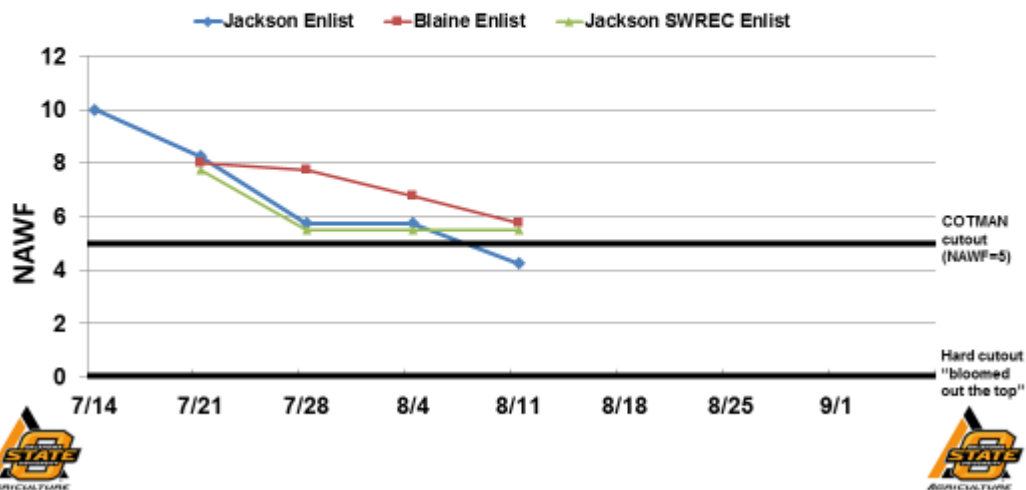
Photos courtesy of University of Georgia

JG

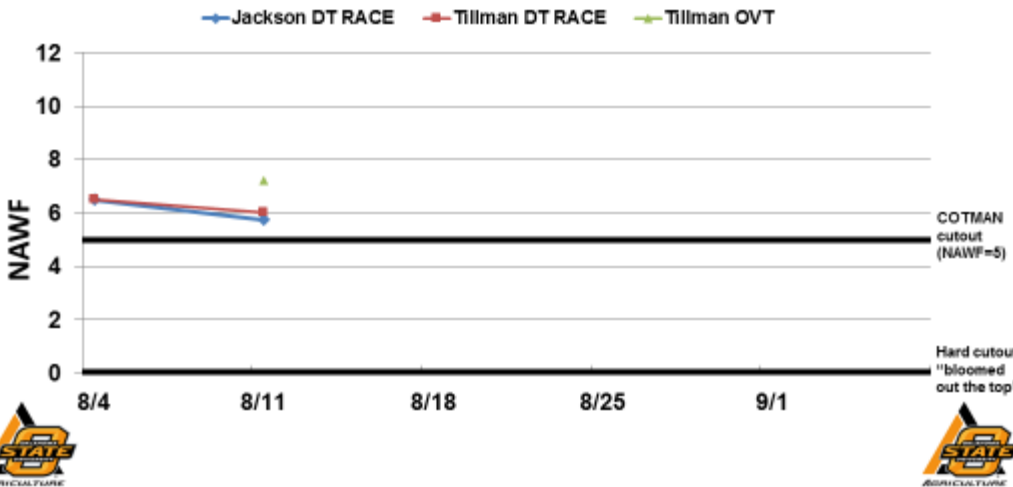
2017 NAWF - Irrigated Field Surveys



2017 NAWF – Irrigated PhytoGen Enlist Innovation Field Surveys



2017 NAWF - Dryland Field Surveys

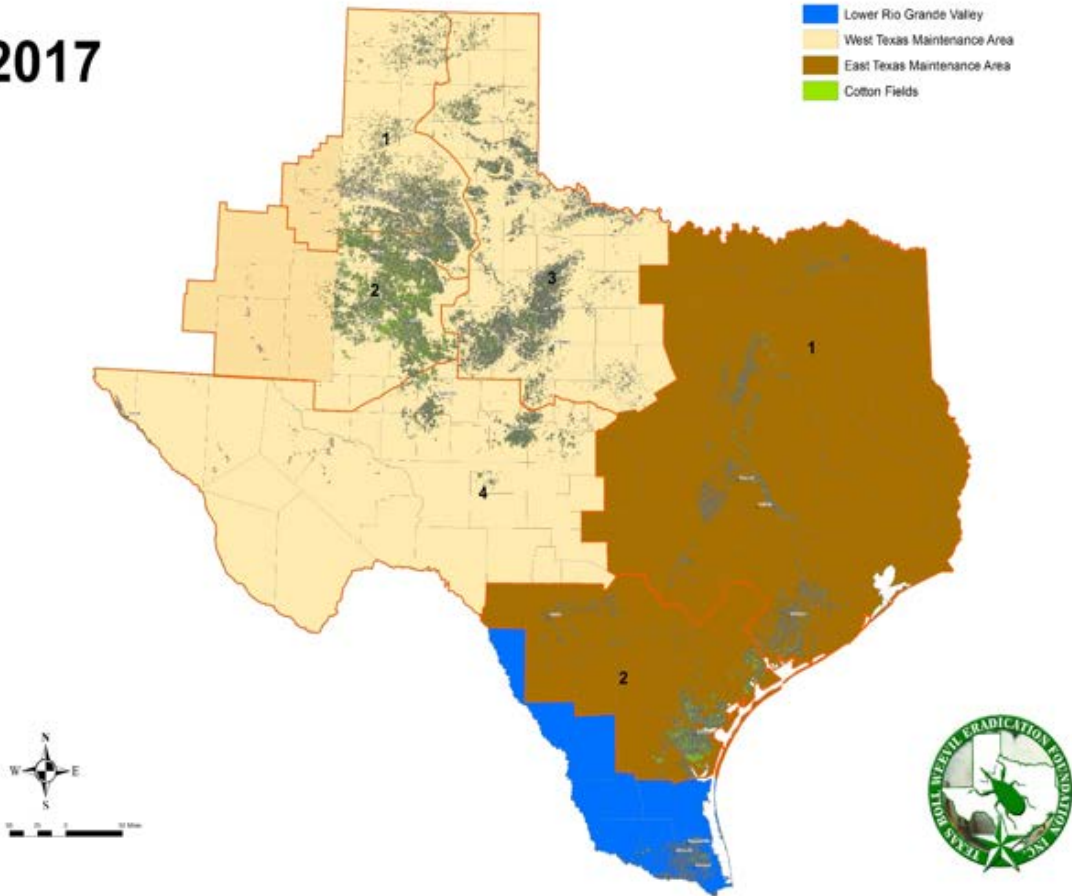


Oklahoma Boll Weevil Eradication Organization Update: Quarantine of Cotton Harvesting Equipment Coming From Certain Areas of Texas

John Henderson, Director of the Oklahoma Boll Weevil Organization, based at Altus, provided the information below. Eradication of the boll weevil across most of the U.S. Cotton Belt, and in the state has been very successful and is a major contributing factor to the continued profitability of cotton production. It has been a long, difficult, and expensive task to rid our state and most of the Cotton Belt of this invasive species that for such a long time negatively impacted our production. There is still a difficult fight with this insect pest in south Texas, and we all need to do our part in keeping this pest from resurfacing in our state.

Cotton harvesting equipment entering Oklahoma from two eradication areas in Texas has to be certified as boll weevil free prior to movement into our state. Please contact the Texas Boll Weevil Eradication Foundation (TBWEF) at least 48 hours in advance of equipment departure from these two areas. This will allow TBWEF to inspect the equipment. A USDA-APHIS phytosanitary certificate is issued and is required before equipment can be transported from these areas. These ONLY include the Lower Rio Grande Valley Eradication Zone (blue area on the map below) or the East Texas Maintenance Area (brown area on the map below). This is critical to meet USDA-APHIS requirements and prevent the re-infestation of boll weevils into eradicated areas. It is illegal to move non-certified cotton harvesting equipment from these areas into the state of Oklahoma.

2017



Texas Boll Weevil Eradication Foundation: 325-672-2800
After Hours and Weekends: 325-668-7361

Oklahoma Boll Weevil Eradication Organization:
580-477-4280 Office
580-471-7962 John Henderson Cell

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Editor

Randy Boman

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