



Cotton Comments

OSU Southwest Oklahoma Research and Extension Center
Altus, OK

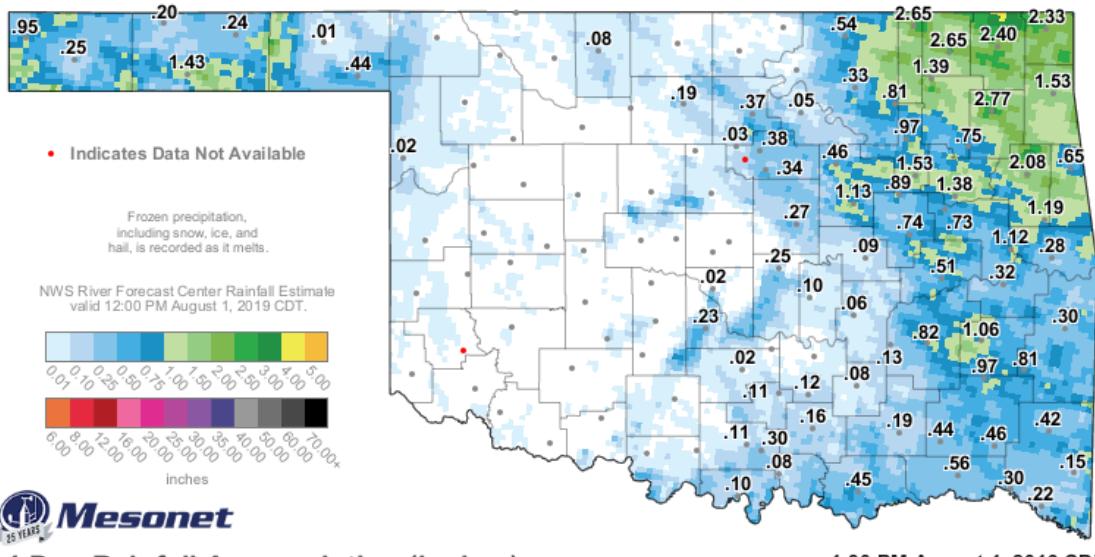
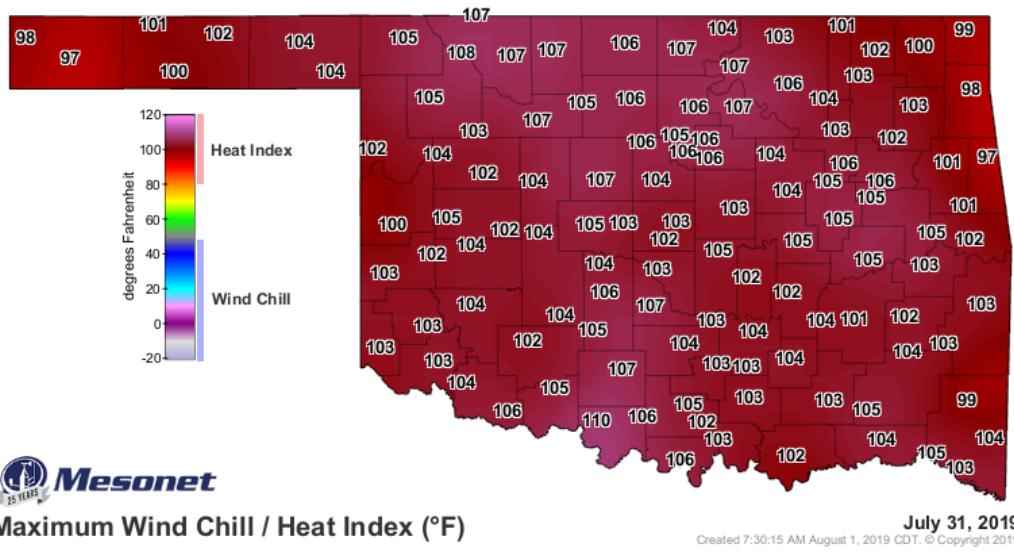


August 1, 2019

Volume 9 No. 8

2019 Current Situation

Hot and dry condition cover most of the state.



Crop Conditions

This year's dryland cotton crop in the southwest counties of the state in general is the best I have seen in years. The only thing that is troubling is the calendar date and no rain forecasted for the next 10 days. If the weather cooperates the crop potential is tremendous. Aphids reports are becoming more numerous and control sprays are increasing. Beneficial arthropods insects have been slow to develop this season. Past history demonstrates the there is a 10 day lag time between first appearance of Cotton Aphids and a beneficial insect population that causes a reduction in number. When an infestation is discovered it is critical to assess the beneficial population to see if a control spray is needed. Spider mites are also on the increase in Tillman county. No other pest have been reported. Thanks to everyone who have reported these events.

After emergence scouting of the field must start and continue on a weekly basis until termination of the crop.

The following two pest have been on the increase so we are reinserted this information again from Cotton Comments Volume 9 edition 6 July 18, 2019 newsletter.

Spider Mites



Spider mites often attack cotton when insecticides have removed beneficial arthropod populations which normally keep this pest in check. Infestations are generally aided by hot, dry weather. In most cases, infestations will be localized in a field. Spider mites damage cotton by feeding on the plant juices and the foliage will turn a reddish or yellowish color under a heavy infestation. Mites are small in size and are generally found on the underside of the leaves. A close inspection is necessary to determine if mites are present. Before considering control measures please contact this office.

For a complete guide to spider mites, click here:

[Texas A&M AgriLife Extension Spider Mite Management Guide](#)

Cotton Aphids



Photos Courtesy of Texas A&M AgriLife Extension

Cotton aphids are small, soft-bodied insects commonly referred to as “plant lice”. Aphids occasionally occur on cotton in such high numbers that control measures should be implemented. Build ups are localized and usually occur after the use of insecticides that are harsh on beneficial arthropods, including pyrethroid types. The insects are found on the underside of leaves and along the terminal stem, causing misshapen leaves with a downward curl and stunted plants. The insect damages cotton directly by sucking juices from the plant and indirectly by secreting honeydew. The honeydew is sticky and can lower the grade of lint. Sticky cotton may result in significant problems during the spinning process at mills. A sooty mold can develop on the aphid honeydew and discolor the lint. For more information on aphids, please click on the following link.

[Texas A&M AgriLife Extension Aphid Management Guide](#)

One chemical not mentioned in the above guide is Sivanto™ from Bayer CropScience. It is also labeled for control of cotton aphids. The product rate of 5 to 14 fluid ounces per acre is noted on the label.

Due to the high probability of beneficial arthropod control of cotton aphids, if this pest is found, any potential control measures should be carefully considered. If you have any questions concerning aphid populations, call this office.

Beneficial Arthropods

Preservation of beneficial arthropods becomes crucial to curb future potential outbreaks of cotton aphids and spider mites. The main beneficial predators are Ladybug larvae and Lacewing larvae. The Lacewing larvae tends to be more aggressive and more of an effective predator. Beneficial arthropods population generally will lag ten days behind the initial infestation of aphids.



Lady Beetle larva

Lacewing larva

For a better understanding of monitoring beneficial arthropods please read the following. If carrying a white bucket is inconvenient just a simple count by plant will suffice. If lacewings adult and/or ladybugs adults are 0.3 row per feet are present please considered a wait and see approach, also one can consider how many larvae and eggs are present. The real concern is when NO beneficial arthropods are present.

Arkansas Cotton Aphid Threshold Putting Beneficial Insects to Work

Funded by University of Arkansas, Arkansas Cotton State Support Group and USDA
Entomologists in Charge: Tim Kring (479-409-9764 research, Fayetteville),
Gus Lorenz (extension, Little Rock), Glenn Studebaker (extension, Keiser)



What was our old threshold, and what was wrong with it?

Our old threshold instructed producers to treat their fields when 50% or more of the plants in a field were infested with cotton aphid, and the population was increasing. It served us very well for many years, and nothing was "wrong" with it. However, it did not take into account beneficial insects, which can be numerous, especially following boll weevil eradication and in BT cotton.

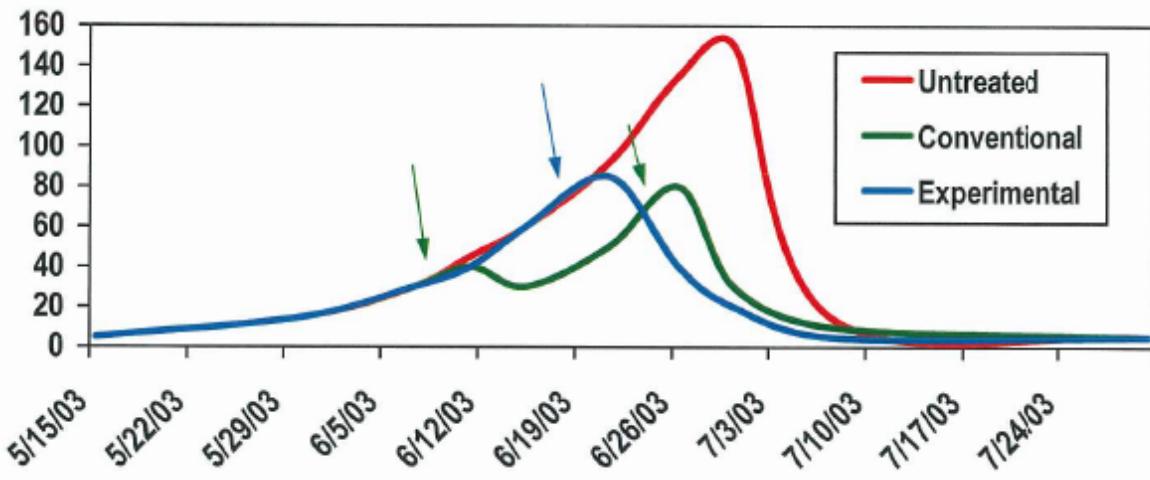
Can thresholds be improved?

Thresholds can always be improved, but the trick is to improve a threshold without causing an increase in costs beyond what you would save. Basic research conducted over 3 years demonstrated that beneficial insects slow the growth of aphid populations. This slowed growth allowed us to delay (yes, delay) applications of insecticides for aphid control. In 3 out of 3 years, the delay in application gave excellent control, did not alter yield, and eliminated the need for a second aphid application. Demonstrations over the next 3 years proved the new threshold worked to eliminate one aphid treatment on every farm (eliminating aphid treatments altogether, or reducing 2 treatments to 1).

Why does the new threshold work?

Basic research on the threshold involved counting aphids on every sampled leaf, and counting and identifying all beneficial insects. We knew this intensive sampling is impossible in the real world. However, our research showed that the presence of lady beetles was a great indicator of potential control by beneficial insects. With the beneficial insects present, growers delay treatment (one week to 10 days). Although this delay in treatment allows aphids to build a week longer than we have in the past, our work showed the building population for one more week did not cause any increases in damage or delays in maturity, and beneficial insects also increased during this time. In most cases, aphid populations were lower after this week delay due to the action of the beneficial insects. If required after this delay, an effective insecticide application reduces aphid densities and eliminates the need for a second aphid application. Note the graph below: 2 applications were made using conventional threshold, only one with the new Arkansas threshold. (Applications at colored arrows).

NOTE: We highly recommend use of Dr. Steinkraus' Aphid Fungus Sampling Service to assist in terminating aphid treatments when fungal epizootics are imminent: <http://www.uark.edu/misc/aphid/>



Arkansas Cotton Aphid Threshold: Directions

STEP 1.
*Sample aphids
(as usual)*



STEP 2.
*Sample Lady beetle
Adults and Larvae*

At each stop for aphid sample, sample 3 feet of row (2 "beat pan" widths), by sharply striking plants on wire mesh covering standard white dishpan (*left*).



Are >50% of the plants infested with a growing aphid population?

If answer is YES,
Are there at least 0.3 lady beetle adults
OR 0.2 lady beetle larvae (#/row-ft)?
IF YES, WAIT 7-10 days for next
sample (STEP 3).
IF NO, treat with insecticide.

If answer is NO, you are
finished until next sample
date, and return to **STEP 1**.

STEP 3.
(After 7-10 day delay)

*Sample aphids and lady beetles
as in Steps 1 and 2*

Are >50% of the plants still infested with a growing aphid population?

If answer is YES, treat with
insecticide.

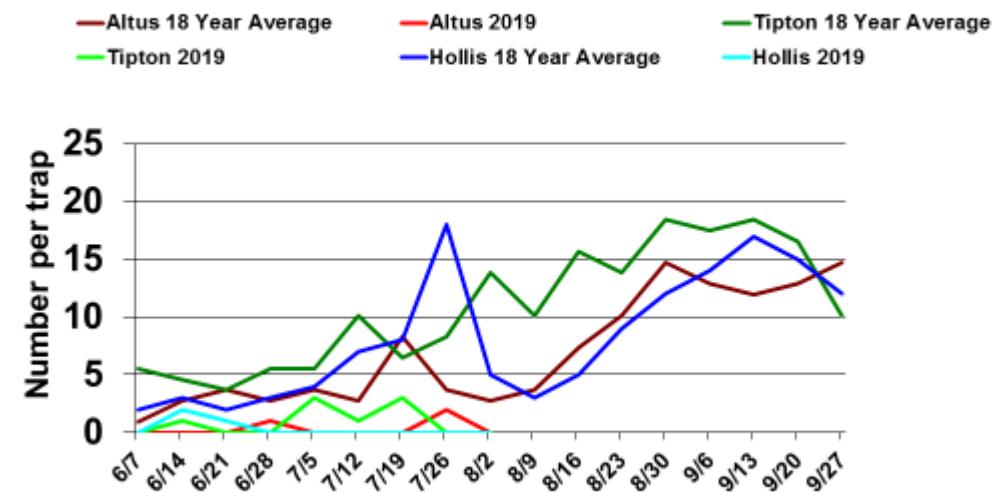
If answer is that >50% plants infested, but
population is not growing and lady beetles
are still at same level,
WAIT 7-10 days for next sample (return to
STEP 3).

If answer is NO, you are
finished until next sample
date, and return to **STEP 1**.

Moth Trap Counts 2019

Moth numbers have been the lowest since we have started monitoring moth flights. All field reports have stated that no moth activity has been observed.

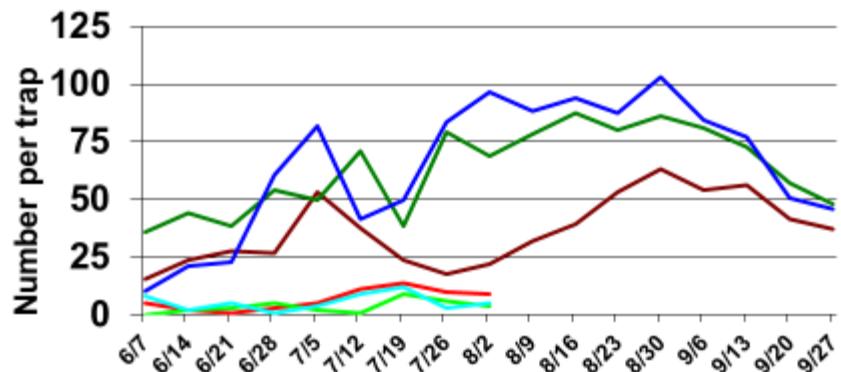
Beet Armyworm Pheromone Trap Catches



Beet armyworm moth
Photo courtesy of University of Georgia

Cotton Bollworm Pheromone Trap Catches

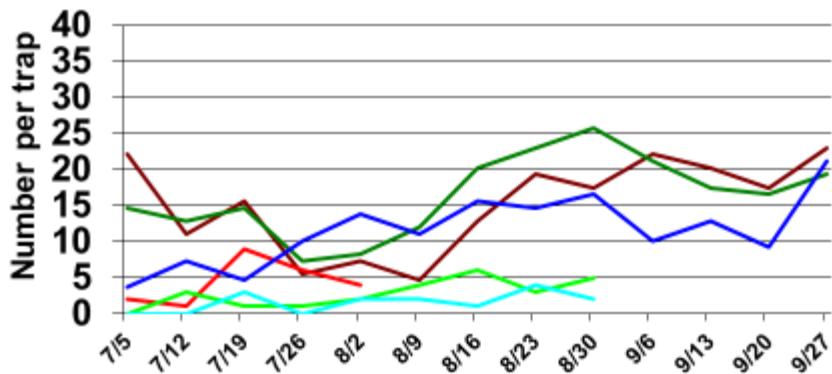
Altus 18 Year Average Altus 2019 Tipton 18 Year Average
Tipton 2019 Hollis 18 Year Average Hollis 2019



Cotton bollworm moth
Photo courtesy of University of Georgia

Tobacco Budworm Pheromone Trap Catches

—Altus 18 Year Average —Altus 2019
—Tipton 2019 —Hollis 18 Year Average —Tipton 18 Year Average
—Hollis 2019



Tobacco budworm moth
Photo courtesy of University of Georgia

Fall Armyworm Trap Results 2019

Date Week ending	Jackson	Tillman	Harmon	Caddo
6/28	1	3	0	5
7/5	7	8	4	4
7/12	6	5	5	8
7/19	3	11	10	7
7/26	6	2	1	4
8/2	0	5	3	0

Jackson OSU Southwest Research and Extension Center

Tillman OSU Southwest Agronomy Research Station

Harmon Harmon County Fair Complex

Caddo Caddo Research Station



Photos courtesy Oklahoma State University

2019 Dicamba Training

Applicators planning to use specific dicamba herbicides labelled for the Roundup Ready Xtend Crop System™ for soybeans and cotton must complete U.S. Department of Agriculture-approved dicamba training before spraying these products this year.

"Whether you're a certified applicator or driving the application equipment you have to be trained," said Todd Baughman, Oklahoma State University Cooperative Extension summer crop weed specialist. "Even if you went through training last year, you're still required to go through the Oklahoma Department of Agriculture, Food and Forestry approved training this year."

Only the ODAFF, Extension and the three major manufacturers – Monsanto, DuPont and BASF – are authorized to provide the training. To be certified please contact your local extension office.

Oklahoma now has a 24C label for Engenia and Xtendimax in dicamba-tolerant cotton and soybean.

To view the 24C labels please click on [Engenia](#) or [Xtendimax](#).

The following was contributed by:

Todd A. Baughman Professor of Weed Science Oklahoma State University

Highlights for 24C for Engenia and Xtendimax in dicamba-tolerant cotton and soybean:

Applications may be made up to 90 days after planting on dicamba-tolerant cotton.

Applications may be made up to 60 days after planting and/or the R1 growth stage, whichever occurs first on dicamba-tolerant soybean.

Applications are permitted any time of the day (sunrise to sunset) as long as there are no temperature inversions at the field level.

DO NOT apply more than two postemergence applications per year.

Restricted Use Pesticide: For sale to and use ONLY by Certified Applicators. Noncertified applicators are prohibited from applying these products.

Training Requirement: Prior to the use of these products, certified applicators must complete mandatory dicamba training approved by the Oklahoma Department of Agriculture, Food & Forestry (ODAFF). For more information on training, contact ODAFF at: pesticide@ag.ok.gov.

Applicators need to have a copy of the full federal label along with a copy of the 24C label in their possession if applications are made under the conditions of the 24C label (24C labels for both attached).

For further questions Todd can be reached at
Institute for Agricultural Biosciences
3210 Sam Noble Parkway Ardmore, OK 73401
Cell: 940.613.1275
Phone: 580.224.0623
E-Mail: todd.baughman@okstate.edu

Oklahoma Boll Weevil Eradication Organization

Brenda Osborne, 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. Since 1998 the producers of Oklahoma has spent **\$37,218,599** to eradicate and provide a maintenance program.

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 acres for past five years

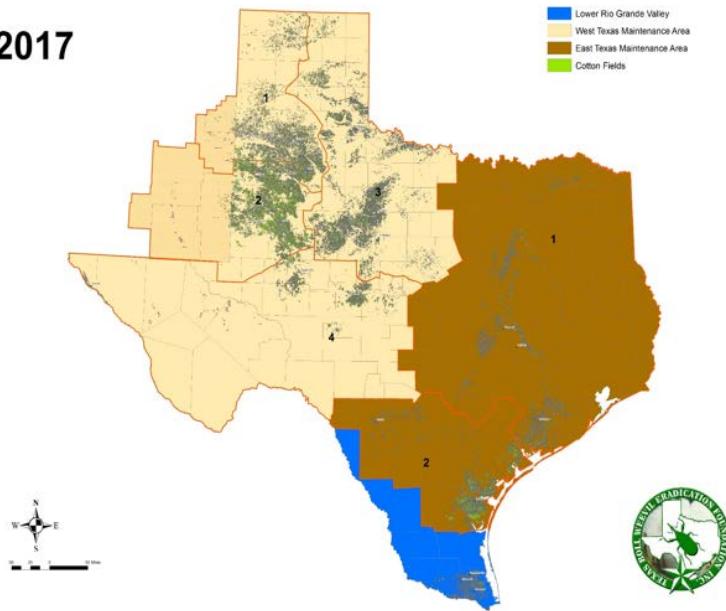
<u>Year</u>	<u>Acres¹</u>
2014	237,523
2015	216,678
2016	299,302
2017	568,434
2018	756,397

¹ Oklahoma Boll Weevil Eradication Organization

OBWEO is preparing for the upcoming 2019 cotton season. It is our responsibility to ensure the continued success of this program. With all the talk of a significant increase in cotton acres, there are some important issues with respect to OBWEO that you need to be aware of. If you have been growing cotton for the past 3-5 years, we know where those fields are located. However, if you are a new producer or have not grown cotton in several years, we need you to provide the legal descriptions of these new cotton fields. There is a Boll Weevil Assessment for harvested cotton acres. The current assessment is \$2.50 per harvested acre. This assessment is reviewed annually. The trapping density this year is one trap per 640 acres. In areas where planted cotton acreage density is high, not all fields will actually have a trap near it. In other areas that are more isolated, each field will need a trap.

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 t 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

Contact John Lamb at the Frederick office at 580-335-7760 or cell 580-305-1930 for the following counties: Tillman, Cotton, Comanche, Atoka, Bryan, and Stephens.

Contact Brenda Osborne at the Altus office at 580-477-4287 or cell 580-471-79632 for all other counties.

Harvey Schroeder Executive Director Oklahoma Cotton Council has relaunched his Oklahoma Cotton web site.

Please click on emblem to visit it.



The Cotton Comments Newsletter is maintained by Jerry Goodson, Extension Assistant. If you would like to receive this newsletter via email, send a request to:

jerry.goodson@okstate.edu

Jerry Goodson
Extension Assistant
16721 US Hwy. 283
Altus, Oklahoma
(580) 482-8880 office
(580) 482-0208 fax

www.cotton.okstate.edu

www.ntokcotton.org

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