



# Cotton Comments

OSU Southwest Oklahoma Research and Extension Center  
Altus, OK



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## Insect Control Update

After surveying southwest Oklahoma cotton trials and talking to consultants and scouts, **flea hopper populations are on the increase which can threaten the early season square set.** Due to late planting of this year's crop this year cotton crop many fields are near the same stage of plant development. Cotton fields are either squaring or starting to square. Fleahoppers seem to be just sitting there "waiting". All fields need to be scouted as soon as possible and a control plan for this pest initiated.



Cotton Fleahopper

Field Surveys in Oklahoma week ending July 3, 2015.

Location	Date of planting	Plant Stage	Insects	Comments
Beckham Irrigated RACE - Damron	June 3	Pinhead Squares	Schedule for spray	Good
Beckham Irrigated Innovation DEMO Damron	June 3	Pinhead Squares	Schedule for spray	Good
Blaine Irrigated XtendFlex Enhanced Variety - Schantz	June 1	Match head Squares	10% Fleahopper	Good
Blaine Irrigated Cotton Inc Enhanced Variety - Schantz	June 2	Match head Squares	16% Fleahopper	Good
Blaine Irrigated Bayer CAP - Schantz	June 1	Match head Squares	14% Fleahopper	Good
Blaine Irrigated Dow Innovation Schantz	June 1	Match head Squares	14% Fleahopper	Good
Caddo Irrigated OVT – OSU Station	June 8	6 <sup>th</sup> Truleaf	<1 Thrips per plant	Good
Harmon Irrigated Cotton Inc Enhanced Variety - Cox	May 27	Match head Squares	Sprayed	Good
Harmon Irrigated Bayer CAP - Horton	June 1	Pre-squaring	None detected	Fair
Jackson Irrigated RACE - Darby	June 2	Pre-squaring	None detected	Good
Jackson Irrigated OVT - Altus Station	June 4	Pre-squaring	None detected	Good
Jackson Dryland Race - Abernathy	June 9	Pre-squaring	None detected	Good
Jackson Irrigated Weed Control Trials - Altus Station	June 4	Pre-squaring	None detected	Good
Tillman Irrigated RACE - Nichols	June 3	Pre-squaring	None detected	Good
Tillman Dryland RACE - Fischer	June 10	5 <sup>th</sup> Truleaf	None detected	Good
Tillman Dryland OVT - (Tipton Station)	June 10	4 <sup>th</sup> Truleaf	None detected	Good
Washita Dryland RACE - Davis	June 3	Pinhead Squares	None detected	Good

RACE – Replicated Agronomic Cotton Evaluation Trial (Oklahoma Cooperative Extension)

CAP – Cotton Agronomic Plot (Bayer CropScience)

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

Since the introduction of Bt cotton and boll weevil eradication the cotton fleahopper has become the number one pest in Oklahoma. The cotton fleahopper usually feeds on young succulent weeds such as croton, goatweed, and horsenettle in early spring. These weeds also provide an overwintering site for eggs. As the weeds mature, adults migrate to cotton which is beginning to develop pinhead squares. Fleahoppers insert their sucking mouthparts into the small squares. These damaged squares later turn brown and are shed from the plant.



Photos courtesy Dr. David Kerns, LSU AgCenter, formerly Texas A&M AgriLife Extension, Lubbock.



Photo courtesy of Shane Osborne



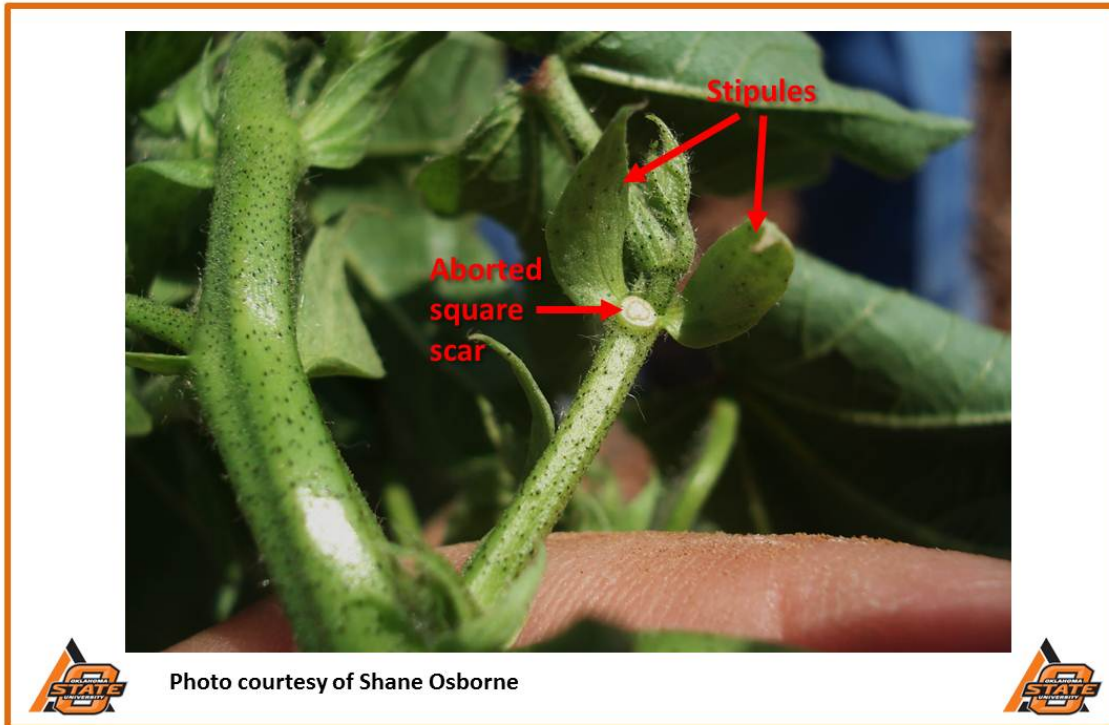


Photo courtesy of Shane Osborne

In addition to squares, the cotton fleahopper will also feed on other parts of the plant. If heavy infestations exist, new growth will be abnormal and whip-like in appearance. All stages of the life cycle will feed on the plant as long as it remains succulent. As cotton matures, these insects migrate to weeds or other host crops. In southwest Oklahoma, the highest population typically occurs in cotton in early August, although this is not generally a problem that late in the season.

The life cycle begins with the female placing her eggs into the plant tissue by means of an ovipositor. The eggs hatch in approximately 1 week, and small nymphs (which are similar to the adults, except for being wingless) undergo five molts before reaching the adult stage. Egg to adult takes approximately 3 weeks with six to eight generations per year. The cotton fleahopper adults are approximately one-eighth inch long, winged, and pale green in color. They are covered with small black spots and have four characteristic black spots near the wing tip. The nymphs are about one-twenty-fifth of an inch long, wingless, and pale green in color.

Numerous chemicals are registered for control of fleahoppers. In an ideal situation, fleahoppers should be controlled only when thresholds are exceeded in order to preserve beneficial insects since these will help control later occurring pests. Unless the cotton is extremely late, after July 25, control of cotton fleahoppers generally is not economical.

Spray decisions should be based on the squaring rate and level of cotton fleahopper infestations. Usually when cotton fleahoppers (adults and nymphs) reach or exceed 30 per 100 terminals and squaring rates begin to decline, treatment is justified. However, if

cotton fleahopper numbers build slowly, fields can tolerate higher numbers before a reduction in squaring rate will occur. In most cases, fields will no longer be vulnerable to cotton fleahoppers once they begin to bloom.

Chemical control of cotton fleahoppers is a fairly easy to accomplish and several products provide good control. However certain chemicals may not be advantageous. Care must be taken to preserve beneficial insects that will help in controlling cotton aphids and spider mites. Flaring of these pests can be avoided by using products that are “easier” on beneficial insects.

The list of chemicals that control cotton fleahoppers includes Vydate, Orthene, Bidrin, Intruder, Centric, Trimax Pro, Carbine, Lorsban, Steward, Lannate, Dimethoate, and various pyrethroids. Bidrin has a label allowing its use in cotton from emergence to prebloom, but you can't apply more than 3.2 oz/ac during this period. According to research conducted by Texas A&M AgriLife Extension at Lubbock, products least likely to flare secondary pests include Carbine, Bidrin, Steward and low rates of Orthene. Other insecticides such as Intruder, Centric and Trimax Pro won't flare aphids and are probably fine to use as well, but have been implicated in flaring mites. Pyrethroids are typically not recommended for fleahopper control because they tend to be very disruptive and may flare aphids and bollworms in non-Bt cotton.

If you have questions concerning insect control issues, please call the OSU Southwest Research and Extension Center or contact your local OSU County Extension Educator.

**JG**

## **Upcoming Meetings**

### **July 8 – Minco Gin**

#### **Grady County/Canadian County In-season Management Meeting**

For more information contact:

Brad Secraw – Grady County Extension Educator – (405) 224-2216 or Kyle Worthington  
– Canadian County Extension Educator – (405) 262-0155

### **July 8 – Kiowa Technology Center, Fort Cobb**

In cooperation with Kiowa Caddo Technology Center, the US Department of Labor Wage and Hour Division will be presenting a compliance assistance seminar for agricultural employers. Topics of discussion will include:

- Agricultural Employment under the Fair Labor Standards Act
- Migrant and Seasonal Agricultural Worker Protection Act (MSPA)
- H-2A Visa Program
- Field Sanitation Provisions of the Occupational Safety and Health Act
- Child Labor Requirements in Agricultural Occupations

The event will be held on July 8 from 9:00 am until Noon, with registration beginning at 8:30 am, and will be held at:  
Kiowa Caddo Technology Center  
1415 7th St  
Fort Cobb, OK 73038

### **July 9 – Cotton and Sorghum Management Meetings**

**Harmon County (Gould Community Center) 9:30 a.m. -12:30 p.m.**

**Jackson County (OSU Extension Office on north side of WOSC campus) 5:30 – 8:30 p.m.**

Cotton Early and Mid-Season Management Topics  
Cotton Summer Herbicide Options  
Cotton Insect Updates and Outlook  
Summer Sorghum Management Topics  
Utilizing Forage Sorghums as part of a Cow Calf Feeding Program

**August 18 – 2015 Oklahoma Irrigation Conference – Caddo-Kiowa Technology Center, Fort Cobb.** Topics include: Irrigation Scheduling, Cotton Irrigation Requirement, Managing Salinity, Variable Rate Irrigation, Sensor-Based Technologies, and more. \$15 registration per person. **6 Total Certified Crop Adviser CEUs – 5 CEUs for Soil and Water and 1 CEU for Crop Production.** For more information call David Nowlin – Caddo County Extension Educator - (405) 247-3376.

The 2015 Oklahoma Irrigation Conference registration website is available here:

[Oklahoma Irrigation Conference](#)

[Oklahoma Irrigation Flyer](#)

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Editors  
Randy Boman  
Shane Osborne

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Contributing Authors  
Jerry Goodson

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](mailto:jerry.goodson@okstate.edu)

Randy Boman  
Research Director and Cotton Extension Program Leader  
16721 US Hwy. 283  
Altus, Oklahoma  
(580) 482-2120 office  
(580) 482-0208 fax  
(580) 481-4050 mobile

[randy.boman@okstate.edu](mailto:randy.boman@okstate.edu)

[www.cotton.okstate.edu](http://www.cotton.okstate.edu)

[www.ntokcotton.org](http://www.ntokcotton.org)

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