

FOCUS on South Plains Agriculture

A newsletter from the Texas A&M AgriLife Research and Extension Center at Lubbock

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Cotton Entomology

Cotton Insect Update

Cotton fields across the High Plains region are now at various plant phenological stages including fields of newly emerged cotyledon leaf stage plants to other fields with plants having up to 4-5 true leaves. This wide diversity of field plant stages is due to many factors such as the time of planting, field conditions, and weather events. In general, the last two rain events and accompanying cooler temperatures for several days have been conducive for the development of seedling diseases and poor root and upper plant growth. While cotton plants are struggling to grow out of the harsh below-ground environment, other High Plains cotton field locations have been affected by damaging hails and blowing sands. Producers are out and busy sand-fighting their fields to help the cotton seedlings to grow.

Generally speaking, cotton fields at this point seem to be growing slow and “behind” the normal expectations. The good news is that this year we have not experienced significant pressure of thrips populations in cotton. Cotton acres south of Lubbock have experienced negligible levels of thrips pressure. Our scouting efforts indicate that thrips numbers in cotton are really low and much below economic threshold levels, even in cases where cotton is planted next to wheat fields. However, some areas in the northern High Plains (Hale and Swisher counties) have experienced moderate levels of thrips and producers have made insecticide applications to manage these elevated populations. Although seeds with insecticide treatment should protect cotton plants from thrips for a 2-3 week period, prolonged time periods to germinate and attain desired growth stage may reduce this “period of protection” and plants become vulnerable to thrips injury.

Once cotton pass beyond the 4-5 true leaf stage, plants can sustain thrips injury without significant economic loss. Weeds are also growing profusely following the frequent rain events. It may be a good opportunity to tank mix an insecticide such as acephate with a herbicide, thus combining weed control and thrips management into a single field operation. It is important to keep the fields weed free as much as possible because some of these weeds (such as Russian thistle and silver leaf nightshade) can attract other insect pests such as cotton fleahoppers and *Lygus* bugs into your cotton fields.

As cotton enters into the squaring stage, we must keep an eye on the square (fruit) retention of the crop. Cotton fleahoppers will be of primary concern during the early squaring fruit-set stage of cotton. Adult fleahoppers are pale green in color, oval shaped and about 1/8 inch long. Adult fleahoppers are quick to fly short distances once plants are disturbed. Nymphs are also pale green to greenish in color and they move fast within the plant canopy. Both adults and nymphs can cause injury by feeding on young terminals of plants and small squares (pin-head size) using their needle like piercing-sucking

mouthparts. Feeding due to cotton fleahoppers can cause small squares to die off and turn brown, resulting in a “blasted” appearance. If the squares have already fallen off, a resulting “scar” will be evident at those fruiting positions.

Sampling for cotton fleahoppers should be initiated when cotton is at the early squaring stage and continue until first flowering. Whole plant visual sampling and/or drop cloth methods are appropriate for the plants at this stage. Sampling frequency should be at 5-7 days intervals, but under heavy infestations this sampling interval should be lowered to 3-4 days. Besides counting the number of fleahoppers (both adults and nymphs), crop growth stage and percent square set should be estimated during each sampling effort. Sweep nets can also be used to sample fleahoppers, but it may be harsh on the young tender cotton plants.



Adult cotton fleahopper (placed near a dime for comparison)



Immatures of cotton fleahopper

The three following pieces of information are required to determine the threshold for cotton fleahoppers and decide when to initiate control measures: 1) number of fleahoppers per 100 terminals, 2) crop growth stage and 3) percent square set. For west Texas cotton fields, use the following economic thresholds:

- On the **FIRST** week of squaring, 25-30 fleahoppers/100 terminals and less than 90 percent square set
- On the **SECOND** week of squaring, 25-30 fleahoppers/100 terminals and less than 85 percent of square set
- On the **THIRD** week to squaring to 1st bloom, 25-30 fleahoppers/100 terminals and less than 75 percent square set.

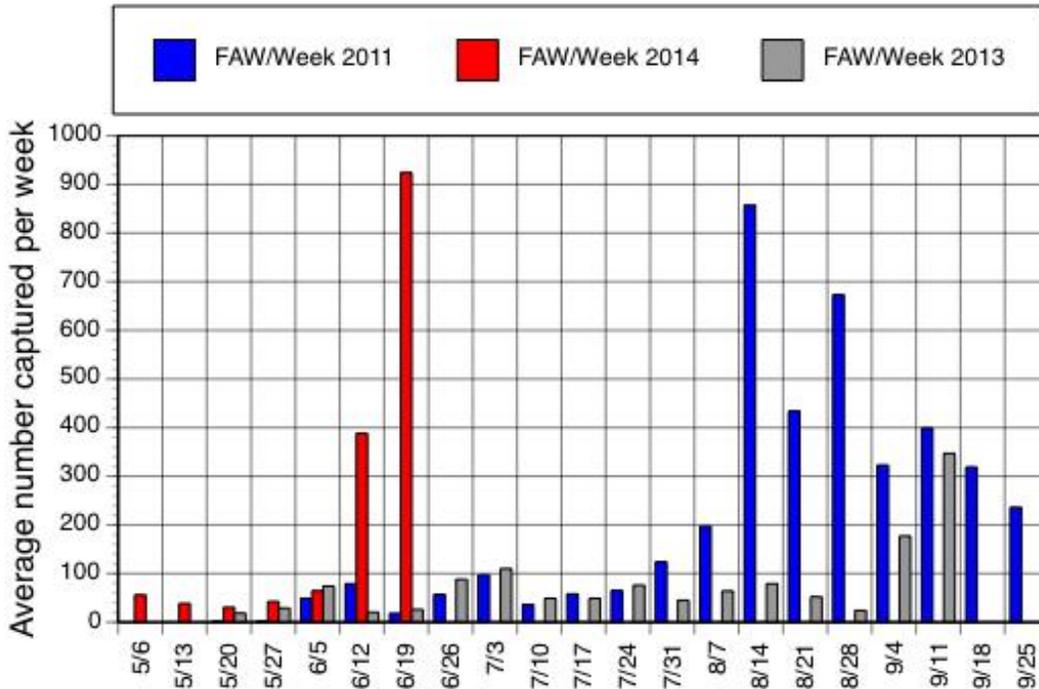
As soon as our crops become more established and recover somewhat from weather or insect related issues, accelerated plant growth and fruiting development should be possible due to good soil moisture availability following our recent rains. Please do not hesitate to reach me at Apurba.Barman@ag.tamu.edu or 806-407-2830 (cell) regarding any cotton insect related questions. **AB**

Corn and Sorghum Insects

Fall Armyworm Captures Still Very High

Weekly fall armyworm pheromone trap captures continue to be at levels far, far above normal. The good news is that the numbers have been lower the last couple of days and the flight seems to be losing steam. Lubbock County has the the highest captures, but Hale County (Gary Cross) and Bailey County (Haden Hadley) are reporting higher than normal numbers as well. Muleshoe reported over 700 moths per trap this week. These moths will prefer to lay eggs on corn if they can find it. Their second choice is sorghum or pasture. Non-Bt corn should be scouted but I do not expect any of the fields to reach the treatment threshold of 30 percent of leaf tissue removed. All of the types of Bt corn currently sold will do a good job of killing fall armyworm larvae. My biggest concern is the higher overall numbers of fall armyworms in the system. This could mean more yield loss in corn and sorghum down the road, but we will have to watch and wait.

2014 fall armyworm pheromone trap captures (moths per week) at Lubbock. 2011 was a high fall armyworm year.



Spider Mites Found

Blayne Reed, IPM Agent in Hale and Swisher counties, and Dr. Ed Bynum, Extension Entomologist in Amarillo, are reporting finding the first colonies of spider mites on corn. Greg Cronholm, retired IPM Agent in Hale County, is also finding a few spider mites.

Uncommon Minor Pest of Corn

I encountered an unusual pest feeding in corn this week, *Mozena obtusa*, one of the leaf-footed bugs. There is not a risk of economic loss from this insect, but I thought I would pass the sighting along, especially as it is very, very common on corn in Lubbock County. This insect is a plant feeder, but the literature says that it only feeds on mesquite. Well, the literature is a little short of being completely right on this one. The images below show the bug and the damage it does to corn. Again, this is not a threat to yield and I am only presenting it as a curiosity. **RPP**.



Mozena obtusa adult



Mozena obtusa feeding damage to corn

Small Grains Agronomy

Hailout-Replant-Late Plant Guide-2014

“Reminder: AgriLife Extension’s 12th annual hailout/replant/late plant guide was published June 12. For resources on assessing hail and wind damage, evaluating field stands and for replant and late plant guidelines on 11 different crops, consult “2014 Alternative Crop Options after Failed Cotton and Late-Season Crop Planting for the Texas South Plains” by Drs. Calvin Trostle and Mark Kelley. The document is on the main page at <http://lubbock.tamu.edu>
CT and MK

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Editors: Apurba Barman and Patrick Porter

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Contributing Authors:

Apurba Barman (AB), Cotton Extension Entomologist
Patrick Porter (RPP), Extension Entomologist
Calvin Trostle (CT), Extension Agronomist
Mark Kelly (MK), Extension Agronomist

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