FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
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Cotton Insects

Thrips

With increasing temperatures, much of the area's cotton is rapidly growing and is beyond the window for significant damage from thrips. Once a plant has 5 to 7 true leaves it should no longer suffer economic damage unless the thrips density is extremely high. You should continue to watch for thrips in your smaller cotton, and there is surprisingly still quite a bit of it around (primarily replanted fields). Where Temik or a seed treatment of Cruiser, Aeris or Avicta Complete Cotton have been used, be watchful for these products to be playing out. For the most part, it looks like Temik at 3.5 to 5 lbs is providing about 4 weeks of control, but where soil moisture is low, it may play out in as little as 24 days. Likewise, the seed treatments appear to be holding about 3 to 3.5 weeks with good soil moisture, but may last only 16 to 18 days where conditions are dry. Click here to view comparative thrips damage between Avicta, Temik and Acephate. Click here to view comparative thrips damage between Aeris, Temik and Acephate.

Cotton Fleahoppers

Some of the earlier planted cotton fields are beginning to see pinhead sized squares, and thus it is time to watch for cotton fleahoppers. So far this year I have only seen a few fleahoppers around; but they are out there. Unlike last year, most of our region has seen enough moisture to spur the growth and bloom of silverleaf night shade (aka white weed). Fleahoppers will often first develop on this weed and move into cotton if the weeds are mowed or dry down.

The decision to treat should be based on the presence of fleahoppers along with square set. If there are quite a few fleahoppers present and the square set is acceptable, you should probably plan on re-visiting the field in 3-4 days. Square sets can drop from > 90% to less than 60% in a little as a week. Remember that the action threshold is a guideline and based on plant health, water availability, and other factors, what is considered as an acceptable square set can differ. Fully irrigated cotton can often make up for early square loss through compensation, and in fact may over compensate under some circumstances. However, depending on the length of time and heat units available before crop maturity, some compensated squares may not have the time to develop desired boll and lint maturity resulting in quality issues such as low micronaire. Dryland cotton will often have a hard time compensating for lost squares, but because in drier years many of these fruit will be naturally shed, aggressive management of fleahoppers may not be well founded.

Cotton fleahopper action threshold is 25-30 cotton fleahoppers/100 terminals with:

Week of squaring	Square set
1st week	< 90 percent
2nd week	< 85 percent
3rd week to 1st bloom	< 75 percent
After 1st bloom	Treatment is rarely justified

Cotton fleahoppers are fairly easy to kill with insecticides, but selecting the right insecticide is a little more involved. Insecticides with notable fleahopper activity include: Orthene, Intruder, Centric, Trimax Pro, Carbine, Lorsban, Steward, Lannate, Vydate, Dimethoate and various pyrethroids. Bidrin, which was commonly used for fleahopper control in the past, had restrictions placed on it during pre-squaring to first bloom. Recently AMVAC recently received a supplemental label for cotton fleahopper up to first bloom at rates up to 3.2 oz/ac. At the time we will be treating for cotton fleahoppers, it is important to consider the preservation of beneficial insects and choosing a treatment that is less disruptive in causing outbreaks of secondary pests. Of the insecticides listed above, products that will be less disruptive include Intruder, Centric, Trimax Pro, Carbine and Steward. However, there is speculation that Intruder, Centric and Trimax Pro may flare mites under some circumstances. Pyrethroids are not recommended for fleahopper control because they tend to be very disruptive and may flare aphids, and bollworms in non-Bt cotton.

Lygus

Lygus do not typically infest early squaring cotton in great numbers in our area, but occasionally they will so we need to watch for them. We have been picking up very large Lygus populations in some area alfalfa fields (as many as 400 Lygus per 100 sweeps); so closely watch squaring cotton that is nearby recently cut alfalfa. Also pay close attention to squaring cotton fields near safflower. In Gaines County, Lygus have been fairly light in safflower, but in Moore County we have collected 120 Lygus per 100 sweeps from safflower. I do not expect the Lygus in the safflower to move out of that host any time soon, but as soon as the safflower begins to dry down we need to pay close attention. DLK

Lygus may build high populations in alfalfa and safflower as pictured above

Cotton Pests Around the State
Upper Coastal Bend (reported by Clyde Crumley, IPM Agent, Matagorda, Wharton, and Jackson counties)

Conditions have been hot and dry. The balance of the cotton is approaching cutout. Aphid populations have either been treated or

have crashed in the past several weeks. Lygus number have been low, while treatable numbers of Creontiades plant bugs are showing up in near Palacios and Tintop. Bollworm damaged squares are ranging from 0-14%, and stink bugs and some spider mites are being found in Matagorda County.

Southern Blacklands (reported by Marty Jungman, IPM Agent, Hill and McLennan counties)

Fleahopper numbers range from 0 to 32%. Percent square sets range from 75 to 90%. Most of the cotton is past fleahoppers. Thrips remain a problem in cotton planted in last several weeks.

Northern Blacklands (reported by Glen Moore, IPM Agent, Ellis and Navarro counties)

As of June 5, conditions have been hot and dry. Cotton growth at this time varies from 2-3 true leaves to 1/3 grown squares. Heavy thrips numbers continue to be observed. Aphids have been light and fleahoppers have been on the increase.

Southern Rolling Plains (reported by Richard Minzenmayer, IPM Agent, Runnels and Tom Green counties)

Hot, dry and windy conditions seem to be the norm this year. Cotton ranges in growth stage from still in the bag to pinhead square stage. Moisture conditions vary greatly from one area to the next but, generally speaking, everyone needs a good 2-inch rain. Much of the cotton is in 3rd to 5th true leaf stage and looks battered. Between thrips damage and the hot windy conditions, the cotton plant is struggling to hang on. Many fields which did not have an at-planting insecticide treatment, has taken a pretty good hit from thrips and/or a combination of thrips and wind burn.

St. Lawrence Valley (reported by Warren Multer, IPM Agent, Glasscock, Reagan, and Upton Counties)

As of June 5, Cotton ranges from planting to 4 true-leaves. Moisture conditions range from too wet to plant to powder dry. Thrips are causing severe damage to many of the older fields of cotton that had slow growth due to the cold weather around May 18. Some of the fields planted at this time also received severe chilling injury to the developing seedling roots. Wireworms were also heavier than normal in some fields this spring. One field that was damaged due to chilling from the cold temperatures and had high numbers of wireworm damage required replanting. We do have a seed treatment and Temik test within this field. Stand counts have shown to be much better in the treated plots than the untreated. Once again, with warmer temperatures, wireworms should not cause more damage from this point forward.

Cotton Agronomy

Crop Progress Overview

Keeping track of all of the weather events in the big cotton patch has been quite a challenge. Last weekend, several counties were hit with some severe weather and high winds. Some parts of Terry County seem to have been ragged up or destroyed. Lubbock County had storms on both Saturday and Sunday. A large number of acres were knocked out in the Idalou vicinity, and several center pivots were turned upside down by high winds. Recent updates from agents and ginners in Hale and Swisher counties indicate that a considerable number of acres in those two counties are in bad shape. Reports of excessive rainfall and seedling disease in those two counties have been noted. While all of these challenges were occurring there, we still have a large number of dryland acres that remain non-emerged. Some of these acres should begin to be released soon, based on the days past the final planting date. The occurrence of some local rainfall after planting may delay the adjustments of some of these fields. Thursday night of this week saw another ma-

jor thunderstorm system cut across the areas west and north of Lubbock. The extent of damage from that system is not known at this time. It has been quite a challenging year thus far. Based on my recollection, this is probably the most difficult year to track crop progress since 2003.

Temperature wise, the last week has pretty much been "just what the doctor ordered" for High Plains cotton. Click here to view June temperatures. Outside of a high of only 79 degrees on June 10, much of June has been above normal in terms of temperatures. Lubbock's June 1-18 heat units are about 18% above normal. We have seen a very significant growth spurt and turnaround for a lot of fields. Unfortunately, storm damage continues to plague many locations. Overall, undamaged fields are beginning to exhibit some excellent growth out there.

There is an excellent subsurface drip irrigated field just east of the Lubbock Center which is now sitting at pinhead square. This field was planted very timely and received some badly needed rainfall after planting. The stand is great, and the cotton has 10-11 mainstem nodes.

Outstanding field of cotton in Lubbock County

Much of the cotton I saw this week north of the Canadian River near Sunray is looking pretty decent. There have been some bad weather events up there also, but some of the more advanced fields I inspected had 6-7 mainstem leaves and was progressing nicely.

Nice looking cotton near Sunray

Hopefully, things will finally begin to settle down some and provide producers with the ability to get off sand fighters and onto sprayers and fertilizer rigs soon.

Nitrogen Fertility

A one-bale per acre cotton crop will remove about 45 lb of actual N per acre, but due to inefficiencies in uptake and in the soil, about 50 lb N/acre are actually required. It is important to not over fertilize with N if reduced yield potential is anticipated. This is due to the fact that it makes late cotton more difficult to manage on the back side of the season. Some late-season insect problems, such as aphids, can be aggravated by high N status plants, and incidence of Verticillium wilt may be increased. Assess the yield potential of your specific fields and make N fertilization adjustments accordingly. Most of the dryland is still in a "wait and see situation" relative to drought problems. Even a lot of the irrigated cotton is late. Apply sidedress fertilizers as early as practical (but before bloom), and take care to minimize root pruning during application. It takes about 10 lb of N to produce 100 lb of lint. If the yield potential is reduced by one-fourth to one-half of a bale per acre due to late planting or lagging development, then also reduce the actual N rate by 15 to 25 lb per acre. **A good rule of thumb is to apply 30 to 50 pounds of actual nitrogen to dryland fields that are emerged and have decent**

soil moisture. Benefits from low rates of foliar fertilizers are questionable.

A High Plains Crop Production Guide Series publication concerning nitrogen fertilizer management for cotton has been generated by Dr. Kevin Bronson and me. A Department of Soil and Crop Sciences cotton nitrogen fertility guide entitled Managing Nitrogen Fertilization in Cotton is also available. RKB

Corn and Sorghum Insects

Fall armyworm eggs being laid

The only notable development this week has been that the first fall armyworm egg masses began hatching yesterday here on the Research Station. So far the egg deposition is lighter than last year at this time. That being said, it would be a good idea to check non-transgenic corn and sorghum and most vegetable crops for egg masses and small larvae. I am operating moth traps at five locations in Lubbock and Hale counties and will begin reporting numbers next week. RPP

Insect Trap Captures Through June 18th

- Cotton bollworm (corn earworm)
- Beet armyworm

Coming next week:

- Fall armyworm
- Southwestern corn borer
- Western bean cutworm

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