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Crop Management Newsletter

News about Crop Management for producers in Dawson, Lynn and surrounding Counties.

Thanks to the sponsors and the gins who support the Dawson/Lynn IPM Program
(found on page 2)

Current Conditions

We are still getting our scouting program put together and trying to obtain a pattern of which fields are scouted on which days - still waiting on a couple of fields to be placed in the program.

Cotton is developing at a near optimal rate. Of course we always have those fields that get “out-of-step” with nature and the weather patterns that are having problems and are struggling along and they may end up not producing much cotton at the end - time will tell. The sunshine and heat following the rains is ideal for cotton production. I would really like to see temperatures in the 95° to 97° range during the day and stay in the 70's at night. Looks like we are going to have the nights where we need them.

Cotton has started to square (62% of our program fields). Square set is outstanding - averaging about 99% for all fields I am scouting (ranging from 98% - 100%). The most advanced fields have matchhead size squares.

Insect activity remains very light, however, I have one field which has 25 adult fleahoppers per 100 plants. Finding all adult Cotton Fleahoppers and no immatures tells me they are just starting to infest the cotton so be on the watch (discussion below). This week I also found a single bollworm egg, a armyworm egg mass and one plant with three aphids in the terminal. What does this all mean? All it means is my eye sight, with cheaters, is still adequate to do the field scouting. None of these finds are concerning at this point and may never be a problem, but we need to continue to scout our fields so none of these sneak up on us.

Sugarcane aphid is non-existent at this point (see below).

The Square

The square is simply the flower bud of a cotton plant housing the pollen anthers and sepals and surrounded by three (or sometimes four) bracts. They are located on the fruiting branches. In the older varieties the first fruiting branch started at node 5 or 6. In the newer varieties, first fruiting branch starts about nodes 7, 8 or 9.

Cotton has an internal mechanism to regulate the initiation of squares. Squares will appear at every new mainstem node following development of the 1st fruiting branch. The node location of the first fruiting branch is controlled by variety and the environment surrounding the plant during the first weeks after emergence. Adverse conditions will always cause the first fruiting branch to move up the plant - never down. After the first 3 weeks of plant growth, the only possible manipulation of

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square numbers is through protection and sustained plant growth.

Scientists and producers have sought a “magical” chemical or management practice that would make cotton square. An increase in the relative amount of fruit does occur when plants suffer from water or nitrogen deficiency or have been treated with a PGR type product. However, these differences **are not the result of increased square production**, but rather increased retention at lower nodes (PGR’s), reduction in leaf size (PGR’s and water deficit) and reduction in new leaf development (N deficiency), making boll and squares more prominent.

Cotton Fleahopper / Lygus

The Sucking Pest Complex

Here we are talking about Cotton Fleahoppers and Lygus. We see a few lygus throughout the season but mainly we deal with the Cotton Fleahopper.

Fleahoppers are a concern from first square thru the first week of bloom.



The adult moves into cotton from wild weed hosts when cotton begins to square and /or the weed hosts start to dry down. With the recent rains, fleahoppers should be content with staying on the weed hosts for awhile. However, we are aggressively working on controlling the weeds and may be forcing the fleahoppers over to our squaring cotton.

Whiteweeds are one of their preferred hosts, so think about that when you are ready to cultivate, apply herbicide or shred the ditches.

Examine the weed host for fleahoppers to determine the population prior to your weed control strategy. Then follow-up by examining your cotton for any increase in fleahopper activity.

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Fleahopper damage is to the fruit, the squares, of the plant where lygus damage is to the squares and bolls. Pinhead size and smaller squares are most susceptible to damage from fleahoppers. Damage causes the squares to “blast” die and fall off the plant.



Sugarcane Aphid - Where are they?

By Dr. Pat Porter

Given that we know sugarcane aphid overwintered as far north as Plainview, and that it was found on Johnsongrass in Lubbock County in early May, the question we are most frequently asked lately is, "Why don't we have sugarcane aphids yet?"

That is a good question, and I wish I could be totally certain of the answer. I suspect that our beneficial insects wiped out the overwintering aphids. We had extremely high numbers of ladybugs, syrphid flies and the other predators that went into overwintering last year after feasting on sugarcane aphids. In what should be considered to be good news, we also had fairly heavy aphid numbers in wheat this spring, but not enough to do significant economic harm. But these wheat aphids, which were not sugarcane aphids, provided food for our early season beneficial insects, which in turn were available to start munching on the overwintering sugarcane aphids in the area. This is just conjecture on my part, but it is the simplest explanation of why sugarcane aphid was here in the early season and is now gone.

The next most common question we are getting is, "When will the aphids arrive?" Of course no one knows the answer, but later is better, and growers who planted early are seeing a benefit from that practice. Last year the first sugarcane aphids found on the High Plains were discovered in Lubbock County on June 27th, and within three weeks we were scrambling to get fields sprayed. I think that last year we had some colonies beginning to build locally in late June, but, given the wide area infested a few weeks later, it is most probable that one or more flights of winged aphids came up from the south on wind or storm events. This year we probably do have some small pockets of sugarcane aphids locally. The good news is that aphids are not extremely numerous on the Gulf Coast and in the Hill Country. Our colleagues south and east of here are reporting that they have only light to moderate infestations (although some fields required treatment). They are also saying that beneficial insects are catching up to the aphid populations and decimating them. This means there will be fewer aphids traveling on the winds and landing on our front door. If we have fewer aphids colonizing our plants, then the beneficial insects we have in the system will have a better chance of suppressing those that do arrive.

When scouting for fleahoppers you need to approach the plant cautiously. Do not allow your shadow to be cast across the plant you intend to check as the adults will take flight and the immatures will scurry down the plant.

Start scouting by observing the upper portion of the plant then place the upper stalk of the plant between your fingers, like your drinking from a wine glass, and work the terminal area all while watching for immatures moving down the plant and onto your fingers.

The decision to treat should be based on the number of fleahoppers present, 25 - 30 per 100 plant terminals, combined with percent square set:

1st week of squareing 90% or greater

2nd week of squareing 85% or greater

3rd week of squareing 75% or greater

I don't tend to be aggressive towards control of fleahoppers based on years of compensation work I conducted. Cotton always compensated for early square loss without sacrificing quality.

Last year I wrote:

I might tend to be more aggressive with this years crop. With the soil moisture and nutrition levels we have in place, if we were to have the squares removed by fleahoppers the cotton would become the tree that it is supposed to be in the first place. So, we want to allow the fruit load to act as the "PGR," especially in the dryland.

Then August hit and the fields that were protected early unloaded.