TEXAS A&M AGRILIFE EXTENSION

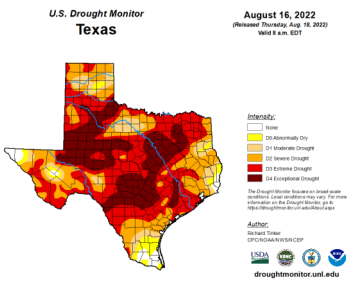
Plains Pest Management News

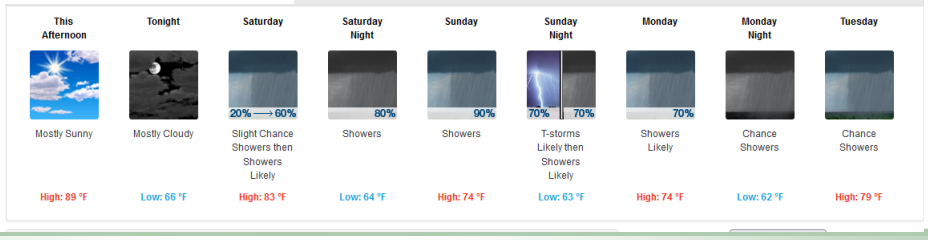
AUGUST 19, 2022

General Status

Rains actually occurred again this week and good chances remain for the next few days. There were select areas that received multiple inch rains, particularly in southern Hale, but most of our acres received 0.2-inches or less. Regardless of what was received, the entire area is far from feeling any real or substantial relief from the drought. There is quite a bit of discussion about whether or not this moisture will even be a benefit to our current crop. It is certainly late in development and has been stressed the entire growing season with several of the grain acres already being harvested, most notably the silage. I feel our surviving fields are benefiting from any moisture received. This benefit is not nearly as large as it would have been a few weeks ago during 'crunch time' and peak water use. Bolls and grain are being filled as they finish out, or even in some of the lusher fields, still being set. There certainly remains the danger of receiving too much moisture before the crops are harvested. This will cause regrowth in most area cotton fields and make management to finish out the year and harvest more difficult, perhaps even causing quality issues. Then there will be field access issues that may combine with rot and lodging issues in grain fields. Even if excess rains come soon, I still note that more than half our acres are currently open, having been destroyed due to failed summer crops. These acres remain open to benefit potential wheat, if quality seed can be found, and next year's fields. Today, we still have our surviving fields to finish out and many are pretty far from the finish line and still at risk for multiple issues. From little rains flushing fresh weed issues to Lygus, stink bugs, and bollworms focusing on our lush or late fields, there remains plenty of threats that will keep us scouting in the fields for a while yet.

A spray plane banks hard to spray one of our ET Lygus fields this week.





Cotton

Our cotton ranges in stage from a lonely and late 5 NAWF (nodes above white flower) up to 1st open boll. Fields in absolute cut-out were the majority with about 75% of our fields working on their last blooms for the year. The later 25% are fields either a bit younger or those with better irrigation capacities or luckier rainfall history making them a touch lusher and still setting their top crop with bottom and mid-crop in full development. There is not much happening in the harsher cut-out fields with them only being susceptible to most pest pressure for a few more days now with even most beneficial populations leaving for 'greener pastures.' We were on high alert in the lusher fields for bollworms again this week. And again this week we were surprised by Lygus populations. This week the majority of these lusher / still susceptible fields had Lygus populations focused on these cotton fields forcing several economic treatments. Our heaviest Lygus population came in at 1 Lygus per 0.89 row feet but all of our lusher fields held at least 1 Lygus per 5.6 row feet. Those that were treated were all experiencing fruit loss due to Lygus feeding and not natural or environmental stress induced fruit drop and held at least 1 Lygus per 3 row feet. Lygus were difficult to find in our harsher cut-out fields.

Lygus nymph from a ET field this week. Note the Lygus damaged fruit shed the insect crawled from on the drop cloth.

Bollworms did increase in our lusher fields also but were not anywhere near treatable levels. Most of the bollworm increases are coming from egg lay with most lush fields holding around 3,000-10,000 eggs per acre. Based upon last week's egg lay numbers and this week's bollworm larva numbers, we are experiencing a mortality rate of at least 67% between egg and 2nd instar worms with our highest worm count coming in at 1,359 small worms per acre and less than 1% harvestable fruit damage. Most fields had undetectable populations of bollworms and the drier / harsher cut-out fields had no hint of worm pressure or damage. This could change quickly with the moth populations of late weeks trying desperately to find suitable host plants for their next generation. While we do not have any late corn in our program, the very few late corn fields in the area are very likely absorbing incredible numbers of eggs this last week. As these egg laden moths are forced to settle for less-than-ideal hosts, anything that looks passible for the larvae to establish on could be targeted, although I doubt they can establish in much of our driest fields, I expect a continued increase of interest in our lush cotton this next week too.

Bollworm egg on leaf.

Area field now 'past' economic insect damage this week.

I fully expect to call the majority of our program cotton 'past economic pest damage' this next week. In these fields, I expect to see large bolls, up top hopefully, and no fresh (or very few) blooms. These larger bolls with no other fruit remaining on the plant should be past the 350 heat units of development to make them too tough for Lygus damage and have carpal wall too tough for boll-worms to bite through and nothing else for these fruit feeders to start on and develop into larger worms that can damage older bolls. For these fields, weekly field scouting can conclude. Still, this 'past economic pest damage' label is not and will not be 100% accurate. Per-usual, cotton aphids could be an issue, especially now with open cotton in the mix and a few cooler days that could enhance aphid population booms. We can usually cover this issue with quick spot checks until and as harvest aid season starts. This year, I am afraid we need to maintain a more active pest scouting for something we on the High Plains are not accustomed to watching for, and it might last from now all the way through 100% boll opening.

Conchuela stink bug adult found in a field this week. During the fall, these tend to cluster in select fields.

This area of concern seems to be stink bugs. They have been increasing in frequency over the past decade or so in our area cotton until they made impacts in certain areas on the High Plains in recent years. Last year, we on the High Plains IPM Team were approached by several gin managers who strongly feel that many area fields had economic levels of stink bugs target and swarm select area cotton fields. They feel this happened in late in September or early October, damaging developing bolls older than we are accustomed to defending. The damage these swarming stink bugs left were unusually high amounts of hard lock and boll rot for our area and a serious reduction in fiber quality. To add to the believability of the threat, this week I came across a notable population of stink bugs in most fields this week and fresh stink bug egg hatch with 14 newly emerged Conchuela stink bug nymphs in one data set, all ready to hit a new target plant right away.

This behavior patterns the gin managers described is certainly accurate for all stink bug species here on the High Plains. Last year, we did note swarms of stink bugs on area sorghum that was below ET for that crop in early September that disappeared by late September. It is very likely they moved, in mass, to select or nearby cotton fields where they congregated in high numbers while we were not scouting for them. There they can take their long and tough proboscis (piercing-sucking mouthpart) and pierce older bolls reaching all the way inside to feed on nearly developed cotton seed. While feeding and already doing damage to the seed,

where fiber development stems from, these stink bugs can drag with their probiscis pathogens that can infect the bolls doing ever increasing amounts of damage. As these early fall populations of stink bugs tend to move in seemingly unpredictable clusters, one field can hold none while seemingly random field another might hold millions for a short time where this damage is amplified and focused.

Figure 41. Boll wall warts.

Proven stink bug damage taken from our cotton insect guide.

We will need to trust our Insect Management Guides for the experience in managing and scouting for this pest: https://agrilifecdn.tamu.edu/texaslocalproduce-2/files/2018/07/Managing-Cotton-Insects-in-Texas.pdf

Even so, I reluctantly expect to maintain something of a weekly pattern for all cotton fields through most of the 'slow' cotton pest management timeframe of September with a few quick drop cloths in fields, and if stink bugs are present, initiate the boll dissection ET decision methods mentioned in our cotton insect guide.

Corn and Sorghum

Our only program corn is currently drying down for harvest, albeit a bit forced by environmental situations and breakdowns in an overworked irrigation system. I do note a very few late corn fields in the area, which should be very attractive to focused bollworms (corn earworm) and spider mite activity. Our older sorghum is moving into hard dough stage while all of our late fields are still in VX whorl stages nearing flag leaf. Sorghum aphid (sugarcane aphid) populations are slowly building in our older field and still well below ET but have not even been found in our late fields yet despite several area fields requiring treatment some time ago and reports of the already moving into the Amarillo – Golden Spread production areas. Our headworm population on our dough stage sorghum is very light at 0.08 worms per head. The whorl stage sorghum is running about an 80% infested rate of headworms feeding in the whorl. Almost all of these are fall armyworms. While the damage looks impressive, it remains around 1-2% foliage lost with about 30% being ET. We do have some concerns with these FAW either moving out on the head with boot and these fields are at high risk for all headworm species moving forward. Likewise, sorghum midge should be a serious risk for these fields. Mite populations remain present in our older sorghum following a corralling treatment but have not been noted in the younger fields.

Closeup of FAW damage this week.

AgriLife Extension Service / Texas Pest Management Association

225 Broadway, Suite 6
Plainview, TX 79072
Tel: 806.291.5267
Fax: 806.291.5266
E-mail: Blayne.Reed@ag.tamu.edu

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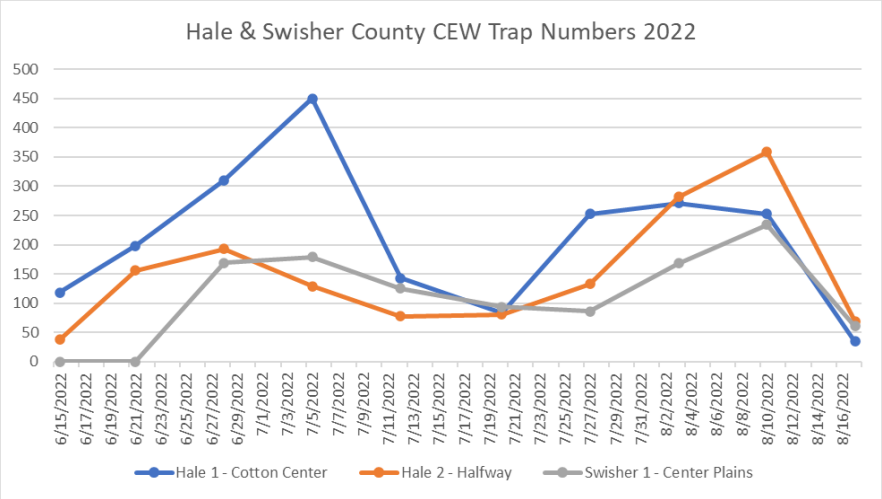

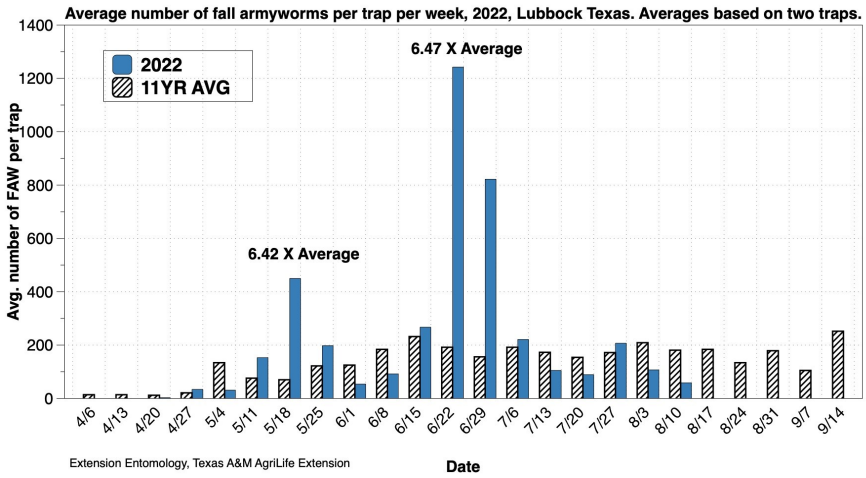

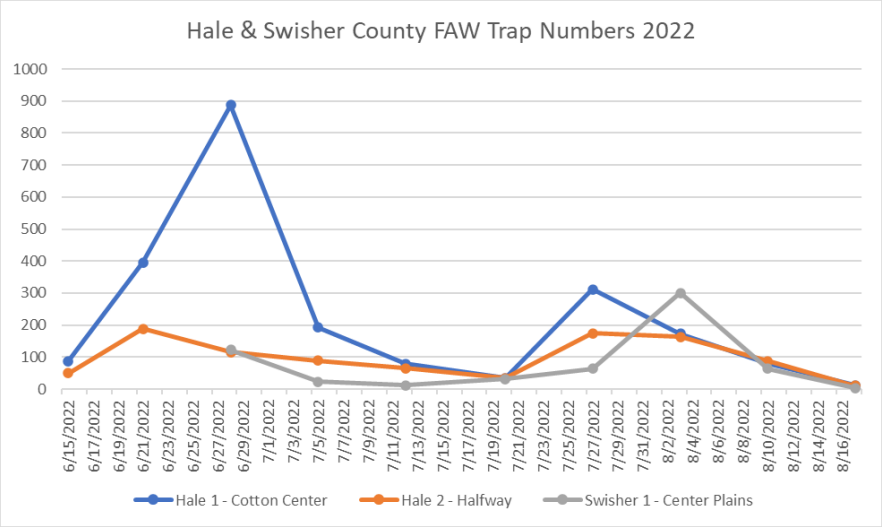

Our southwestern corn borer and western bean cutworm moth traps for all locations in Hale and Swisher have been so low, and usually zero, they have not been worth reporting.

Blayne Reed