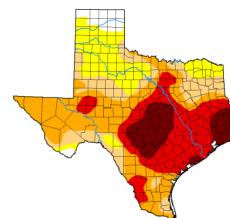


AUGUST 25, 2023

General Status

Another hot, dry week with crops suffering and irrigation systems falling farther and farther behind. I am shocked that the drought monitor map does not have the majority of our area in red to deep red. That certainly represents most field's moisture availability situation today, right here at the tail end of 'crunch time' when every drop matters most. The early season rains we received were a blessing and helped us get off to a solid if not late start when we had little chance of starting anything without moisture help. We had been so dry for so long the rains and limited early irrigations never truly filled our soil profile. When that brief spring and early summer moisture bank started running low, we no longer had the irrigation capacity to meet our crop moisture needs. Even with the amount of irrigated acres continually reduced from seasons' past, we are just not able



Good corn finishing and sorghum under stress at boot

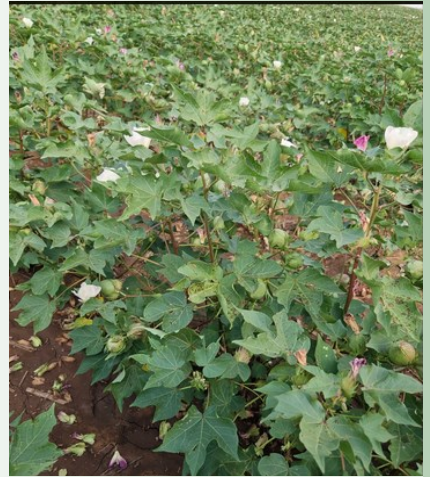
to get enough drops to the crops in most fields via irrigation alone and it shows. The pests are not giving us any slack. We have here another week of multiple fields reaching threshold levels when we really do not need to spend any more money on this crop, but must, in many cases, or we will lose what potential the fields still have. We still have good fields with grand potential forming. We also have bad fields that were good and we have ugly fields that were fair. At least in many of the most stressed fields, the pests are moving away from them, something of a small blessing is suppose given the circumstances. Still, rain chances are back in the forecast. If we receive rain, in sufficient quantities, it should still benefit most fields, even some dryland acres, as strung out in stage as this 2023 crop is. It just would not be as beneficial as it could have been a few weeks ago.

Extended Forecast for Plainview TX

Tonight	Saturday	Saturday Night	Sunday	Sunday Night	Monday	Monday Night	Tuesday	Tuesday Night
Mostly Clear	Sunny	Slight Chance T-storms	Mostly Sunny then Chance T-storms	T-storms Likely	T-storms Likely	Chance T-storms	Slight Chance T-storms	Mostly Clear
Low: 66 °F	High: 95 °F	Low: 67 °F	High: 90 °F	Low: 65 °F	High: 82 °F	Low: 61 °F	High: 84 °F	Low: 58 °F

Cotton

Our Plains Pest Management cotton ranged in stage from the hopeful dryland wild-cat field at 7 NAWF to 1st open boll. The majority of fields have just recently reached absolute cut-out of 3.5 NAWF with plenty of top potential fruit yet to set, if fields can get adequate moisture immediately. We still have a few later, better irrigated fields coming in just under 5 NAWF. We have some concerns about these fields as the average last date for a bloom to have time to develop into a harvestable boll was August 24th. From this point on,



Cotton in SW Hale reaching cut-out this week, holding all the fruit it can in the dry heat.



Bollworm egg from SW Swisher this week.

each bloom has a diminishing chance of developing into a boll and I do not hold out much hope for small or midsized squares at this point. This, along with the associated heavy increase in fruit drop cut-put typically involves, will be important to keep in mind as we consider the threatening pest populations this week and for the rest of the growing season.

For our pests this week, Lygus continues to force themselves to be our main focus in cotton. We have populations in almost all fields, many of them at threshold levels of less than 1 Lygus per 3 row feet. But we did not recommend treatment for all of these fields. In many cases, it was plain that the Lygus were feeding on fruit that were already naturally shedding anyway as the plants hold all they can with the moisture available at cut-out and drop the rest of the fruit on the plant, or the focus of the Lygus' attention were on small squares with no chance of maturing in some of the lush fields. In fields where we noted Lygus causing fruit loss that the plants would otherwise hold, we made the tough recommendation to treat them this late. Research has shown that Lygus can damage bolls up to 350 heat units, so we will need to be watching this population for a few more weeks at least. Determining whether or not Lygus are causing economic drop to harvestable fruit will be paramount in helping you make a treatment decision. Small bolls dropped due to Lygus feeding could still be moist,



More Lygus turning up in numbers in many of our data sets this week.

show at least one pinhole size feeding site, and can have a brownish rot starting near the feeding site. The typical drop caused by lack of moisture at cut-out stage can seem drier and will not have the off brownish rot near any feeding pinholes, whether or not Lygus feeding sites are present. Squares dropped by Lygus feeding almost always sport a pinhole feeding site that sometimes oozes juice while plants have to be under extreme drought to naturally shed squares without any type of damage to them.

Lygus are not the only pest we are seeing again this week. In fact we are finding a plethora of pests, thankfully in small doses. Bollworms certainly are on our radar. Again we are finding eggs fairly consistently in our easter fields but the line did move much farther west and we can find eggs near maturing corn. I would describe this egg lay as light still with most fields exhibiting less than 8,000 eggs per acre. We did not find any bollworm larva in cotton this week and it looks as though our beneficial population is



Cabbage looper in E Swisher this week. This is the closest thing we have to inchworms here.

doing all they can cleaning up this light egg lay for the third week in a row.

We are still seeing cotton aphids in many fields with heavier populations in our southern fields but in no field did the population average more than 0.5 aphids per leaf with the threshold before any open cotton is found around 50-75 aphids per leaf. Once we start seeing open cotton in the field, this threshold drops to 12 aphids per leaf. We could find spider mites, usually 2 spot mites, in a slight majority of fields, again higher in our southern fields but this population was limited to the upper most 2 or 3 leaves and not really hampering fruit development or causing undue leaf stress. Stink bugs began creeping back into a notable amount of fields this week but not enough for us to

trigger any boll dissections to determine thresholds yet. We will need to watch for this pest well after most fields are past damage from just about all other pest species, possibly even into October



Determining fruit drop causes requires an up close evaluations.

ber if the population remains. Cabbage loopers and true armyworms continue to be found in our non-Bt fields, but not above the 8,000 per acre level and usually far below that with thresholds being 50,000 per acre or 6% harvestable fruit damage. We also found a few lost saltmarsh caterpillars in cotton this week to add to the foliar pest populations. We did not find any fruit damaged from any caterpillar pest this week at all. We are also taking good notes on the level of verticillium fields are starting to exhibit for future management decisions.



This is the ideal time to evaluate your level of verticillium in your fields.

Corn

Our corn ranged in stage from VX through drying down for harvest, both silage and grain. Corn was quitter for pests this week, mostly because most of our fields are passed economic pest damage with starch lines forming. It was a race to the very end between



Small colonies of BGM moving up this late central Hale field this week.

the crop's development and Banks grass mites being checked by a moderate to good population of beneficials. A few of these fields increased to 4.5 or so on our 0-10 damage rating scale for mites with threshold being 3.5-4.



Maturing NW Hale silage field to be harvested this week did not quite reach ET for mites.

Luckily, these fields are only days away from the silage cutter and the end of the race before any real damage occurred. Mites are slowly increasing in our late fields as they near tassel. We have not seen any increase in corn diseases in several weeks now. Late corn fields will be the first host plant choice for corn earworms (bollworms) if available. If these fields are only 2 traits for Lep Bt, treatment for the earworm might actually be advisable once egg lay targeting the ear at silk. Unfortunately, these fields will be susceptible to earworm damage for multiple weeks, and I fear this could be very costly to maintain. Luckily, all of our PPM corn this late includes the VIP trait, which should still control the worms, or is non-Bt, where the worms will maintain their cannibalistic traits. We found no other corn pests of note this week.

Sorghum

Our program sorghum and silage sorghum fields range in stage from VX to late dough with most fields either too dry to push heads out in boot stage or hovering around 80% bloom stage. Many of our better irrigated silage sorghum fields are in a VX stage, over 7 feet tall, and still not showing signs of flag leaf while our drought stressed silage fields are not much taller than waist high with drought curled leaves. I make this distinction here to better describe the pest situation. Multiple pests can be found in the lush fields with the sorghum aphid being a primary issue with almost all fields being treated this week or last week.



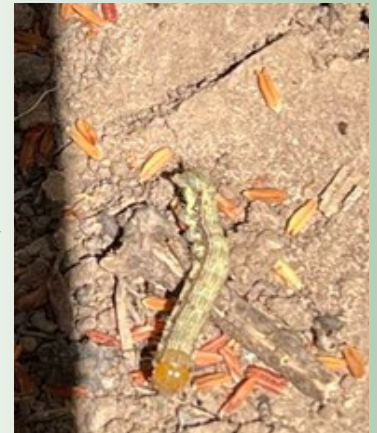
Majority of our PPM fields are near the stage of this SW Swisher field.

In the drier fields, any insect is hard to find, minus the occasional opportunistic foliage feeding grasshopper.



Sorghum aphids in S Swisher this week. Most lush fields required treatment recently.

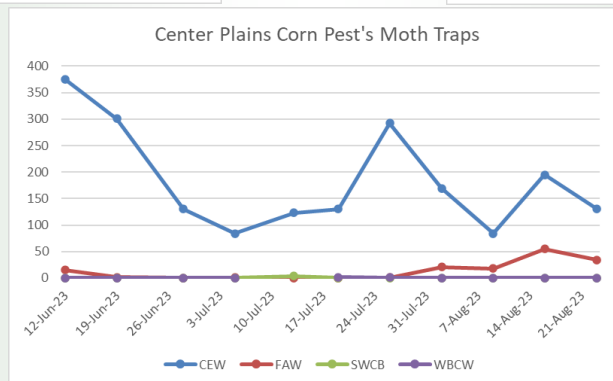
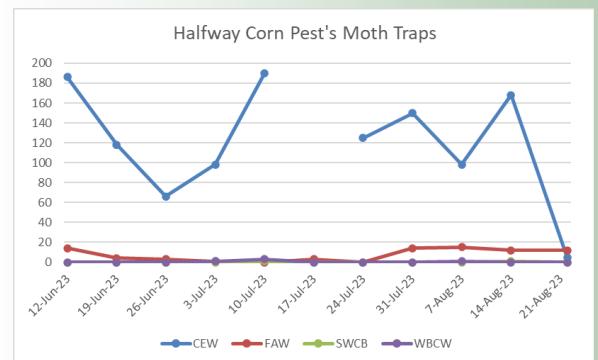
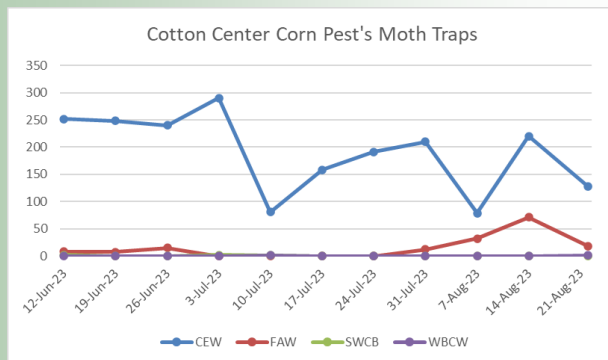
While this distinction between fields was present in our grain sorghum fields also, it was not as stark a difference. Still, most fields that did not show leaf curl have sorghum aphids at or near threshold with multiple fields being treated. Fields struggling, despite irrigation systems being maxed out, pests are hard to find and we have not had to treat very many of these fields for the sorghum aphid. All treated acres and treatments for this aphid seems to be working very well, but we have a long way to go before these fields move passed this pest.



Headworm shaken from one of our beet buckets this week in S Swisher

We did find a few headworms, all of which are bollworms, late this week in blooming sorghum but this was rare and it is not known if was due to the eastern location of the fields or if the trend is just starting. This was still below ET with our highest field only exhibiting 0.16 worms per head. We still have not found any sorghum midge this season in our fields, but all blooming fields are at risk. BGM were still a concern. We have treated several fields in the past 2 weeks, but had none reach threshold this week. We did find a few fall armyworms feeding in whorl stage fields causing very minor damage, but none in fields past boot.

Corn Pest Moth Trap Data:

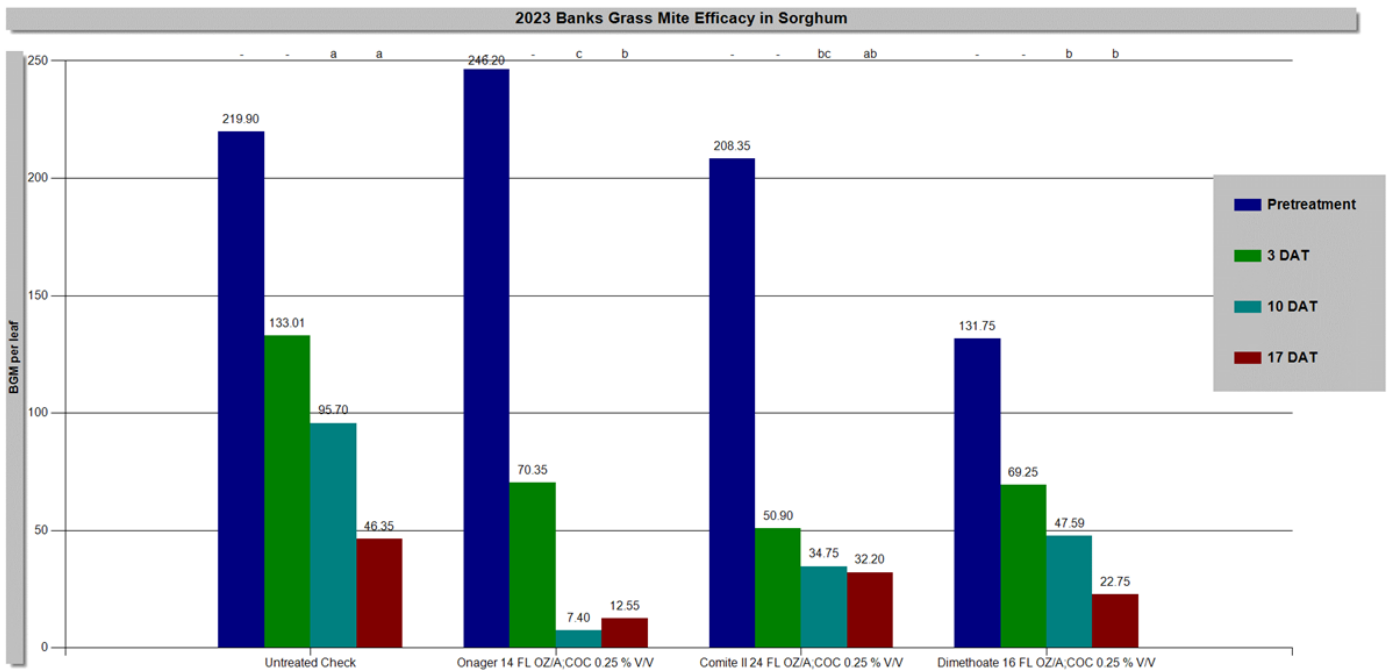


2023 BGM in Sorghum Efficacy Trial Results:

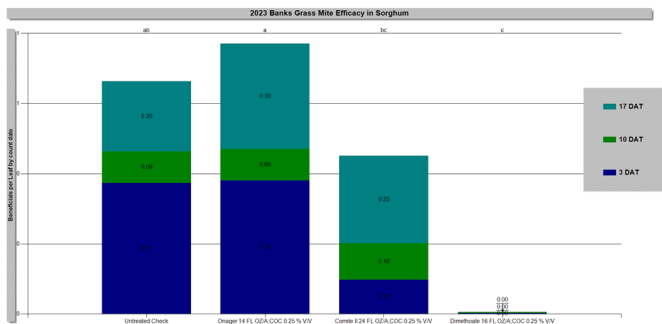
I am sharing these final 17 DAT results today in case they will be helpful for growers this year. For the full write up research report, it will be shared this upcoming spring along with all of our 2023 research projects in our annual Hale & Swisher IPM Report at <https://hale.agrilife.org/ag/ipm/> along with all past seasons reports and research trial results held within. This information will also be shared live at our upcoming Texas A&M AgriLife Extension meetings, both online and in person, this year and next, HPACC and Southwestern Branch of the Entomological Society of America meetings.

I will give a short synopsis here.

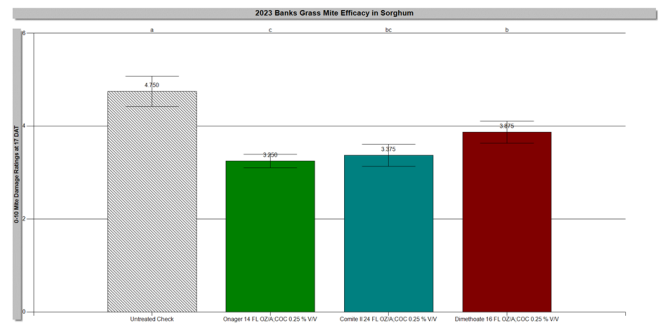
A pocket of high population of BGM were found in one of our grain sorghum fields and a CRBD small plot trial was quickly laid out. All treatments were made via our CO2 backpack sprayer with typical use rates of all mite labeled products available in sorghum. At 11 DAT the remainder of the field reached ET for this pest. While all efforts were made to avoid drift onto the trial, the data indicate that there could have been light drift that influenced the 17 DAT final data. Leaf counts were made pretreatment, 3, 10, and 17 DAT from the 2nd leaf above desiccated leaf. For plots with limited control, this leaf moved up the plant at each count date as desiccated leaves could not support mites any longer as damage increased. This could account for a slight population decrease in untreated plots along with beneficial activity. For plots with better control, leaf stage counts remained lower and closer to the pretreatment count leaf. The 17 DAT damage rating for the plots is very telling. We also made counts on mite specific predators per leaf.



BGM per leaf by treatment (10DAT $P=0.0009$, 17DAT $P=0.0339$ and 10 DAT $LSD=31.17$, 17DAT $LSD=21.62$)



Mite Predators per leaf by treatment (3DAT $P=0.0060$, $LSD=0.28$)



17 DAT BGM 0-10 Damage Rating by Treatment ($P=0.0010$, $LSD=0.581$).



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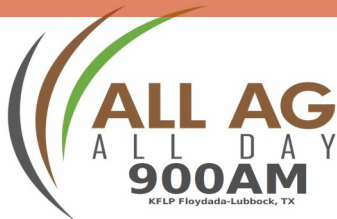
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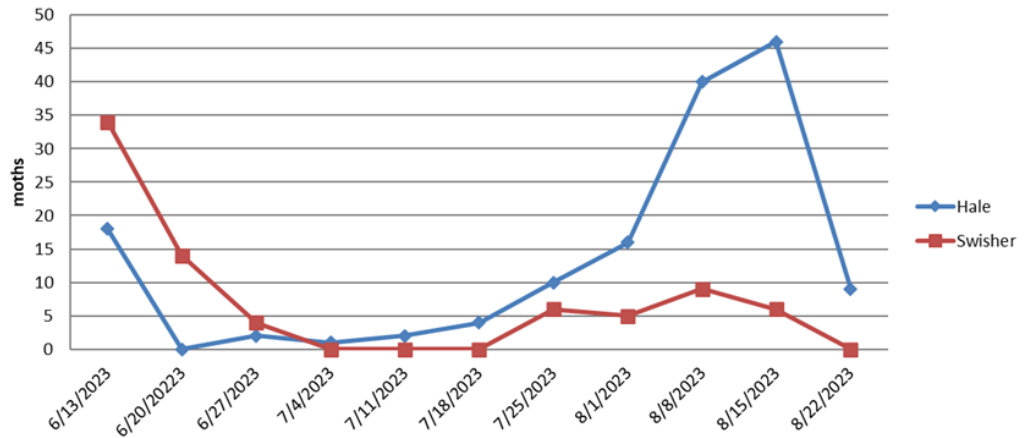
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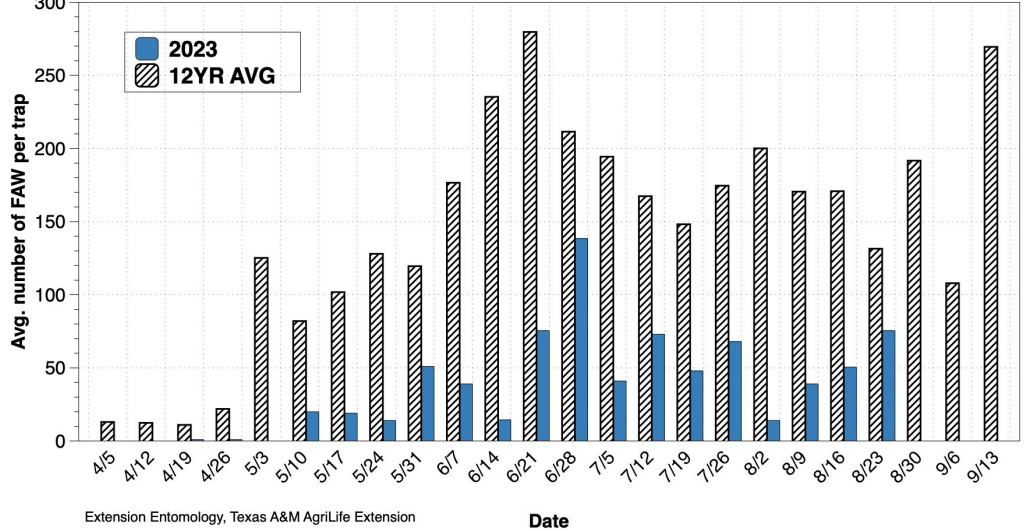


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2023 Adult Bollworm Moth Trap Catches Set Locations



Average number of fall armyworms per trap per week, 2023, Lubbock Texas. Averages based on two traps.



Extension Entomology, Texas A&M AgriLife Extension

Date

Blayne Reed

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