

AUGUST 4, 2023

General Status

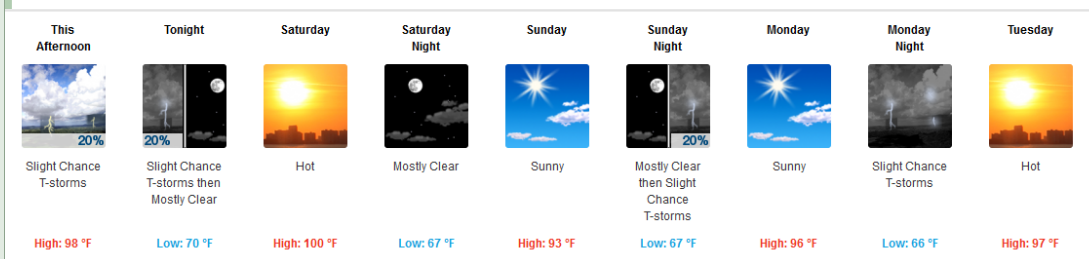
We remain hot, and now, with rain feeling like a distant memory, dry... as we slam into



Our oldest PPM fields developing fruit this week.

‘crunch time’ for our summer crops. What is different this year from the extremely dire situation we had last year at this time is that we have a lot of crops that rain did get off to a green start with high potential. What is not different is our remaining irrigation capacity. Most systems are fired up, running at capacity, and falling behind during peak water use. While it should be producer’s primary focus, it is not only water needs during ‘crunch time’ (early August when our surviving crops are made or failed) that we are having to address this week. We have quite a bit of insect activity in our irrigated fields of every type. During the 2022 season, a fairly light overall population of a few pests focused activity on the highest irrigation capacity fields only, making themselves pocket nuisances. This year, pests of multiple types are hovering around anything green or holding moisture, threatening to build into serious and widespread issues capable of robbing the potential our

crops have. Whether we look at it from an irrigation standpoint, weed control stand point, or pest population stand point, the next two weeks and our input decisions will make, save, or lose this 2023 crop.



Cotton

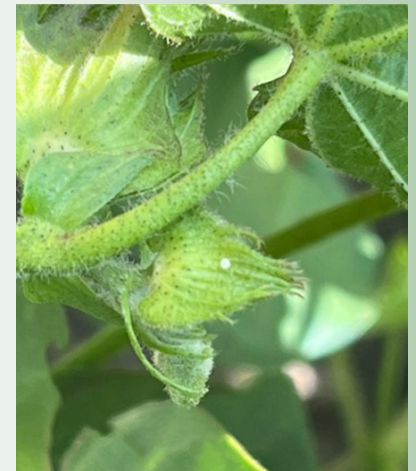
This week our PPM program cotton ranged in stage from the optimistic dryland field at 1/4 square up to 5.2 nodes above white flower (NAWF). Most fields came in between 6 and 7.2 NAWF with some notable first week of bloom fields with NAWF



Lygus nymphs found in our fields this week.

over 8. There were plenty of pests for the new field scouts to experience and learn about this week, but nothing in our program reached economic levels. Fleahoppers remain a concern for the latest fields but seem heavier in fields that have developed well into bloom and past fleahopper concerns. Lygus were found in about half our program fields, some with notable populations around 1 Lygus per 6 row feet with only a slight increase in fruit drop from most fields. Our fruit drop ranged from about 9% up to around 29% with most falling between 15% and 20%, very good for fields entering their 2nd and in some cases 3rd week of bloom. So far,

very few bolls are dropping due to water stress levels and early boll development is good if late. Plants are slowing down in the heat and increasing water needs to feed the developing bolls. Peak water use should hit this week for most fields and fruit drop will likely increase rapidly if plants do not receive enough moisture to set



Bollworm egg found in NE Hale this week.

blooms to bolls as they develop.

We had a bit of a surprise this week with some early bollworm finds in almost all of

our eastern fields ranging from near Floyd and



1st instar bollworm, right out of the egg and starting its search for fruit from SE Swisher this week.

Brisco County to nearly the mid-section of Hale and Swisher. I also have reports of some bollworm activity all the way to the Vigo area nearing Armstrong County. In more about 3/4 of our fields in that NE Hale and E Swisher area, we found either bollworm eggs or small larva, and in some cases both. These were not at treatable levels yet. Our highest egg counts came in at just below 4,000 per acre and our highest larval count came in at 3,218 small worms per acre. Using the old per acre threshold, it should take about 8,000 to 10,000 small worms to reach threshold, but

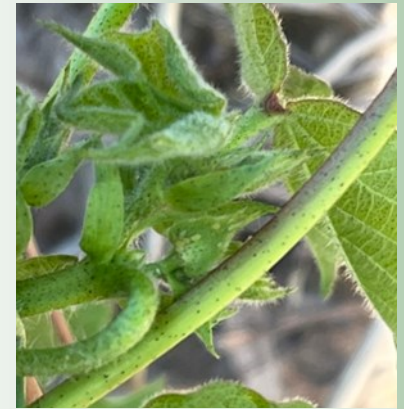
medium or large worms this might be as low as 4,000 worms per acre. The damage from the worms we found this week was very light. If found at all, the most harvestable fruit damage at 1.4% with 6% being threshold.

In our very few remaining cotton fields to the south and west of Plainview, we noted cotton aphids, either clustering around a notable number of terminals or building establishment colonies on midrange leaves. North of Plainview, very few aphids in cotton were noted. Stink bug counts in cotton dropped to almost zero this week. It is hypothesized that grain crops maturing might be more attractive and easier to feed upon for this pest at this time, but we have no



Nabid (predator) in our data this week.

supporting data from our later grain fields to support this. We should stay alert for as early boll feeding from a cluster of stink bugs could be devastating for a field.



Cotton aphids SW of Hale Center this week.

In most of our non-Bt fields we are still finding a notable population foliar feeders, most notably were cabbage loopers, at usually less than 1,000 per acre. All of our cotton fields had at least moderate beneficial predator populations this week with most holding good to excellent numbers. These predators could make a large difference in determining if fields require treatment this next week.

Corn

In our program corn we had no fields reach economic levels either, but did have some increase in activity, especially for Banks grass mites. Our 0-10 spider-mite damage ratings for our post tassled fields increased in range this week to 0.7



Closer look at a BGM colony at -5 leaf this week.

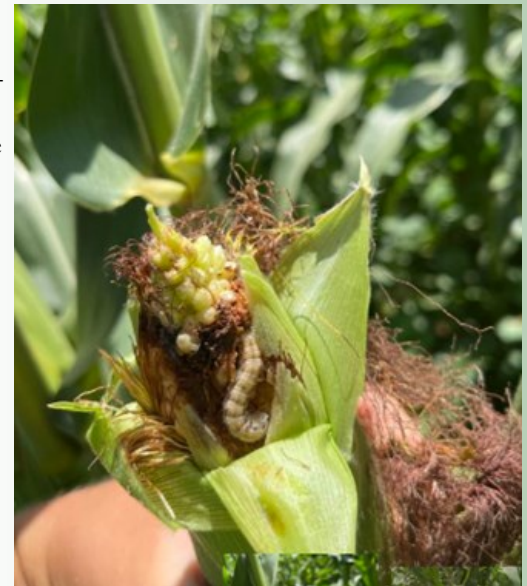
through 2.9 with most fields falling between 2 to 2.5 with 3.5-4 being threshold. It looked as though much of the increase came from fresh infestations with new colonies starting 2 to 4 leaves above the typically first infested lower leaves. In a few cases, we had established populations move with some small colonies up to the -2 leaf. While we are seeing some mite



Small BGM colony up to -2 leaf in SW Swisher.

predators, I would only rate them at light to moderate this week.

While bollworms seem to be moving into our eastern areas, the native population remains focused on corn. In our corn fields with the VIP Bt trait, we are finding very little corn earworm activity and in our non-Bt corn we are only seeing 1 worm per ear with minimal damage. However, in our older 2 Bt trait corn lines without the VIP trait, we are starting to see 2-5 worms per ear. Pat Porter, Extension Entomologist in Lubbock, has five years of data that confirm this phenomenon. Typically, we do not consider corn earworms to be an economic pest in High Plains field corn (sweet corn is another matter) as the worms are cannibalistic in the ear and will eventually end in around only 1 worm per ear with mild tip damage. With resistance to the older Bt traits in the earworm/bollworm population we are noting a trend more and more often where the Bt is impacting the worms just enough that they lose their cannibalistic behavioral trait, resulting in much heavier damage from more worms. With these established worms under the ear shucks, we are not sure what can be done. We do know that to chemically treat fields to prevent serious earworm activity, we would need to treat fields every 3-5 days while the tasseled corn is attractive to the pest, which is often for 3 to 4 weeks. This is simply not economically feasible in field corn.



Multiple larger corn earworms, not showing any cannibalism, moving down a older 2 Bt trait variety ear this week, protected from treatment by the shuck.

The normal cannibalism trait is why we typically do not consider the earworm as economic and give up the usual mild tip feeding from the resulting 1 cannibalistic worm per ear. My best suggestion given the situation is to not grow the 2 trait corn hybrids any longer and either plant lines with the VIP trait or simply non-Bt. The original Bt traits were designed to control primarily corn borers, not earworms. This is something they have done so well, and are continuing to do so well, we have only found 3 southwestern corn borer moths in our corn pest traps this year. Nor have I or any of our scouts found any SWCB eggs so far this year. However, now earworms are resistant to the older Bt toxins. I would really like to see the earworm removed from this level of damage. I do not feel we can sustain or afford the level of earworm damage we are seeing with more and more regularity on the older 2 trait lines and we are seeing it in more and more older Bt only lines, but nothing else.

Sorghum

Our PPM sorghum fields range from V10 to 95% bloom. Most are still in a VX stage with just a few flag leaves poking out. Headworm activity from any species remains virtually zero in the head or the whorl and we still have not found any sorghum midge in our blooming sorghum. The sucking pests on the other hand are quickly becoming an issue. The sorghum aphid (the pest formerly known as the dreaded sugarcane aphid)

increased rapidly from last week. We have not had to treat any field just yet, but that will almost certainly change over the next 10 days, most likely. This week the aphid was in about 85% of our fields, usually at the establishment level I described last week with 2-3% of the plants infested with small colonies on the lower leaves. The earliest fields infested, about 20% of our total fields, increased from that level of infestation last week to 18% of plants infested with large colonies covering the lowest 2 green leaves and nearly the full balance of plants with some establishment colonies on them. Without intervention from beneficials or disease, these



Typical sorghum aphid colonies in most fields this week, S Swisher. These populations could be economic soon.

fields could reach threshold in a matter of days.

Our sorghum beneficial populations did not rate as well as our cotton this week with most fields being comparatively rated as moderate. One issue that might be distracting to the predators this week might be corn leaf aphids. While we usually like to see this aphid in whorl stage sorghum as they offer food for predators to build on while giving no measurable damage to most sorghum lines. This week, these whorl feeding corn leaf aphids began increasing, especially in the southern and southwestern part of Hale just as the sorghum aphid arrived. There has not been enough time for predator populations to build since the CLA infestation began. Today this moderate population of predators are drawn to both aphid species and not able to focus on the main pest in the sorghum aphid. We will see if

the beneficials can moderate this sorghum aphid population similarly to how they have the past year or two, or if we will be forced to treat fields pre-boot.



Silage sorghum in W Hale this week. Silage sorghum is notoriously hard to kill sorghum aphids in. Please note PPM chemigation studies have proven to help this issue in most cases.

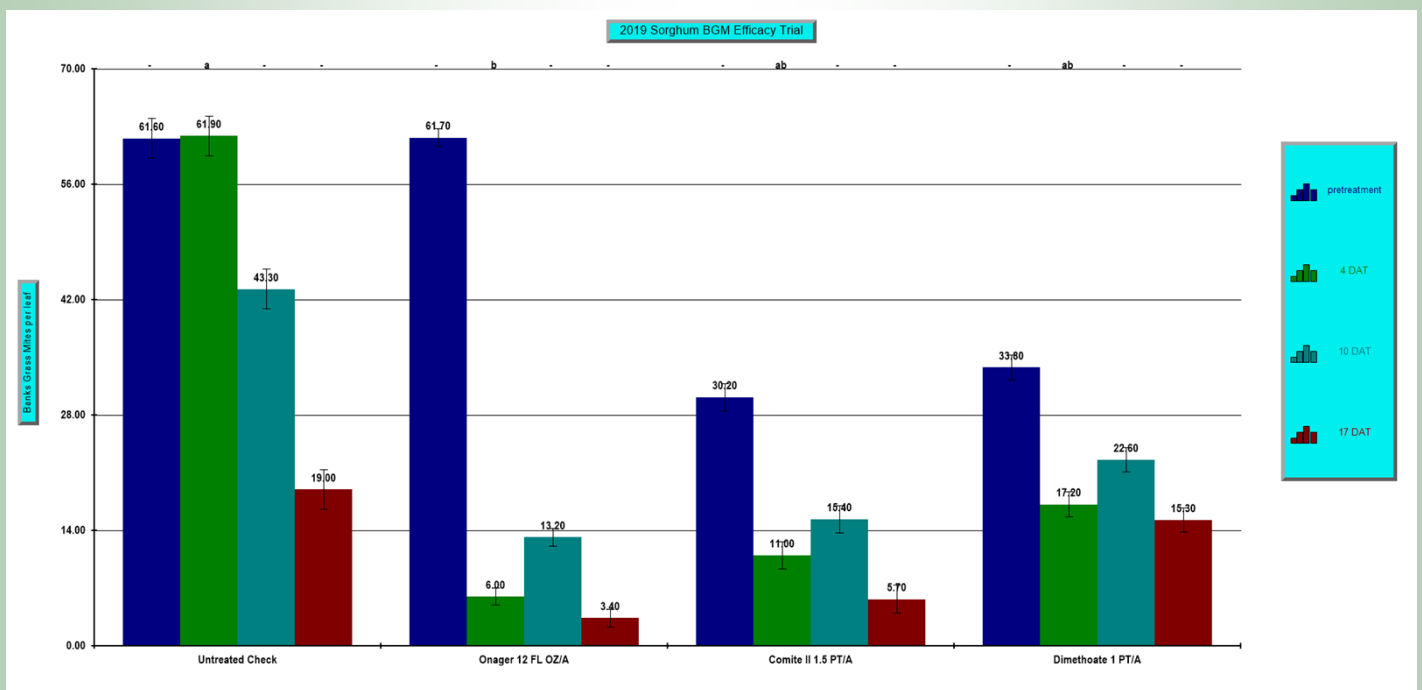
The Banks grass mite has rapidly increased in sorghum this week also. Surprisingly, we have higher populations in a few of our older, and for some reason, select fields than we do in any corn field. In these fields they are almost bumping threshold levels at ratings of 3.4 on our 0-10 mite damage rating system with threshold being 3.5-4. In one of these fields, we have identified a hot spot and initiated a small plot trial testing the efficacy of all miticides labeled for sorghum.

Hopefully, we can offer fresh efficacy data before any area fields reach threshold and have to be treated. It should be noted that there are only 3 products labeled for mite control in sorghum, and one of those is very harsh on beneficials at a time when we are needing their help with the sorghum aphid. There are several more labeled for corn, but only 3 for sorghum.



BGM in a population hot spot in S Swisher this week, rating=4.

Here is the latest miticide efficacy in sorghum data we have, conducted here back in 2019, dealing with the 3 labeled products, all at light rates, Onager, Comite II, and the predator harmful Dimethoate:



Do also note the pocket BGM population crashed for the 17 DAT treatment, even in the UTC. In that field, the sorghum aphid reached ET and had to be treated. Where possible, the predators shifted to the mites to aid in control following the aphid treatment. In terms of yield the Onager and Comite II were significantly better than the UTC and Dimethoate.



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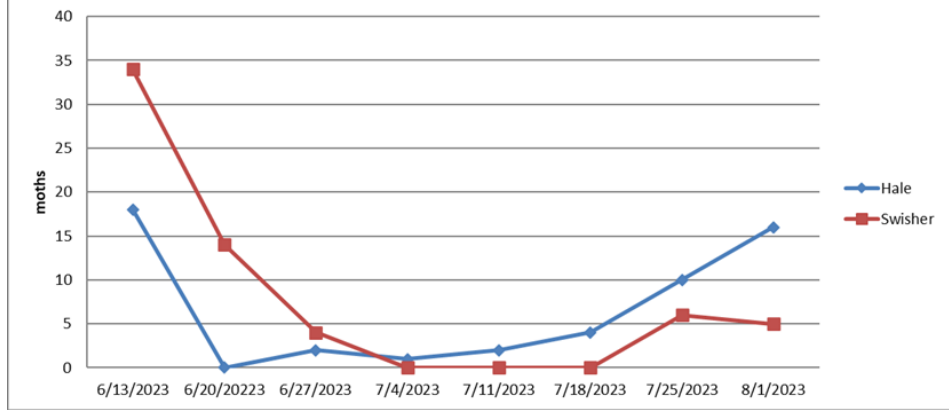
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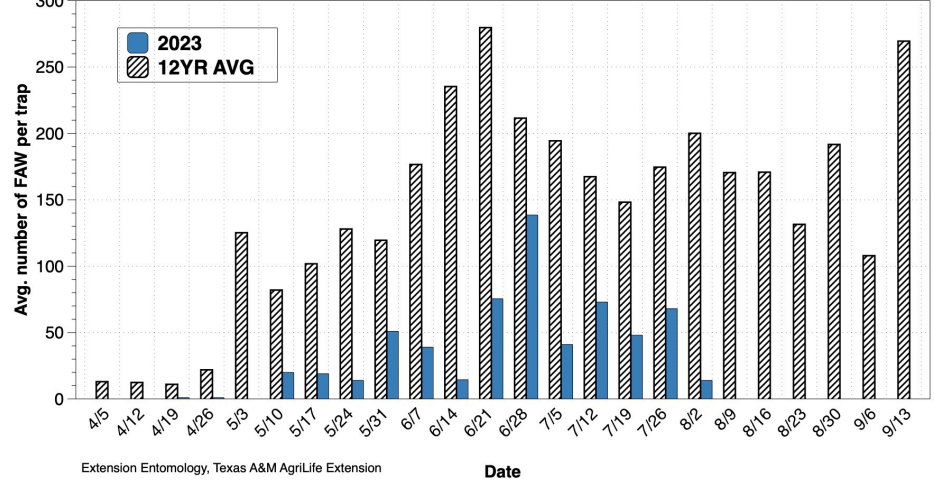


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2023 Adult Bollworm Moth Trap Catches Set Locations



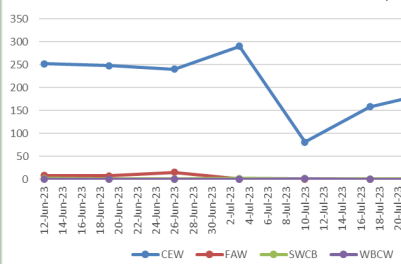
Average number of fall armyworms per trap per week, 2023, Lubbock Texas. Averages based on two traps.



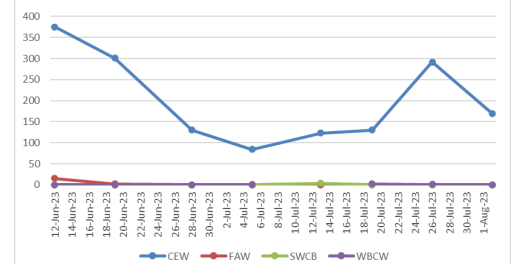
Extension Entomology, Texas A&M AgrLife Extension

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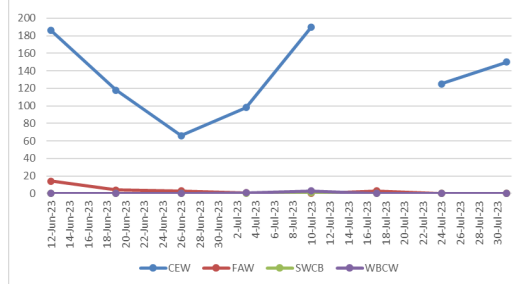
Cotton Center Corn Pest's Moth Traps



Center Plains Corn Pest's Moth Traps



Halfway Corn Pest's Moth Traps



Blayne Reed

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