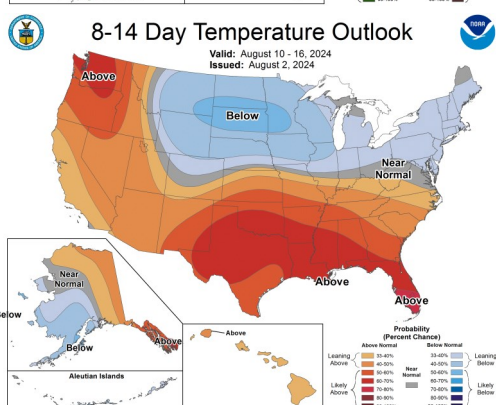
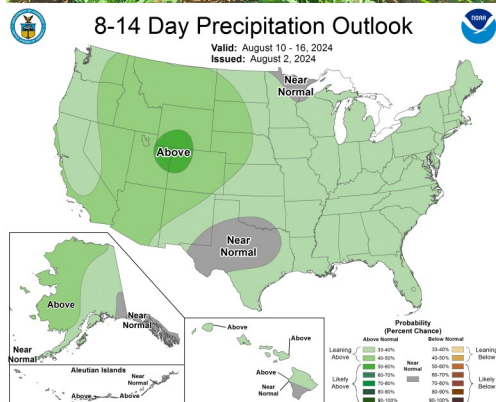


AUGUST 2, 2024

General Status

With no additional moisture and high heat, our crops have been racing through stages and sucking down all the water available. Early cut-out in cotton and keeping grain crops alive and filling grain have been our focus this week. For the second week in a row, we have plenty of pest species to watch, but few threatening economic issues. This week we still have plenty of acres yet to scout with meetings postponing fieldwork, we will remain vigilant this weekend. Not very many weeds germinated this week, but some survivors are a source of eye sores and control focus.



Area millet, cotton, and corn are thirsty in the heat, but developing as well as possible with the amount of moisture available.

Cotton

While we have not been able to get across all of our cotton acres this week, so far our Plains Pest Management cotton ranged between a late established $\frac{3}{4}$ grown square stage and absolute cut-out of less than 3.5 nodes above white flower (NAWF). Most of our fields were hovering just above an early absolute cut-out and 4 NAWF with very few still coming in with NAWF stages above peak water use of 5 NAWF. This is very early to reach this stage with some of the most stressed fields not even making it into August before reaching the critical point of no return at 3.5 NAWF. Once a field reaches this absolute cut-out



One of the few area fields that did receive rainfall over the past few weeks is still at 6 NAWF despite weak water.

stage, cotton plants are running out of 'energy' for vegetative growth and are likely dropping all flowering fruit that it does not have resources to mature into sizable bolls. From

this stage plants will not be able to re-grow any new squares in time to mature fruit even if the situation changes quickly with large amounts of moisture. We generally try to time and schedule the critical 5 NAWF stage for August 10th or so and absolute cut-out at 3.5 NAWF for August 20th with the last average effective bloom date. While that would be an ideal situation, it is our irrigation and input scheduling goal for optimum agronomic results in cotton. With an ongoing drought and irrigation systems not what they used to

be, plants are cutting out early and we are likely to fall short of our ideal yield goals.

All is not lost. The square set leading into this situation has been outstanding and most fields have a decent bottom crop. It is during this 5-3.5 NAWF range that High Plains cotton generally sets its middle and most of its upper crop. Plus plants, while vegetative growth is an almost impossibility, will bloom and hold all the existing fruit they possibly can at this stage. Even a small amount of water in this critical but short and rapidly closing window can hold huge returns in boll retention and yield results. The bottom line is, we have some decent potential on these short plants in the form of squares if we can receive or generate the moisture to hold them.

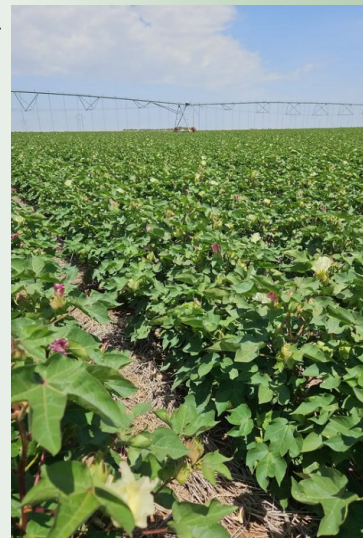


A very small plant at 4NAWF that still has some potential in the form of squares, if moisture can reach it in time to set



Smallish plants at 3 NAWF with decent boll set and more squares to make, if moisture is available.

This concept is already at work in most of our PPM fields with our current situation. The situation is so dire that the volume of irrigation available alone to each field could not prevent the quick shutdown of vegetative growth and rush to absolute cut-out. The addition of the chance provision of the spotty beneficial rain showers to certain fields during the last few weeks on top of irrigations did hold these fields above absolute cut-out and around 6 NAWF. But for the majority of fields that did not receive substantial rains and are plastered to the 3.5 NAWF stage and have the better irrigation capacities are already showing that they can and already are holding on to their middle and upper blooming fruit at a much better rate than dryland or weakly irrigated fields are.



Another small statured field with decent boll set and potential to set more but the moisture window is closing rapidly.

Under these circumstances, not only is every drop of moisture worth so much more but protecting fruit from other dangers becomes a focus. For a field with 'good' moisture available, but a runaway Lygus population or bollworm infestation, the situation would be devastating. We certainly have multiple pest species active in our area this week, most at low levels.



A Lygus nymph 'field caught' under 'field magnification' from one of our data sets this week.

We are picking up Lygus in the area more consistently this week. To date we have some level of Lygus population in about 60% of our fields. For most fields the population was not economic and hovered around 1 Lygus per 9-13.5 row feet or less. We did have one field with a population of Lygus nearing threshold of 1 Lygus per 2.5 row feet (1 Lygus per 3.2 row feet). Unfortunately, the natural fruit drop due to the drought stress in this particular field was already so high, treating this borderline Lygus population would not yield any benefits. I might reconsider my recommendation if substantial rains came to this field in a matter of days.

We have also found some bollworm eggs and small larva in the area, still usually far away from corn acres. These populations were all below 1,000 eggs and 600 worms per acre with far less than 1% fruit damage, and far below threshold levels. Stink bugs continue to be found in about ½ our cotton fields across both

counties. We have not noted any dissected bolls with stink bug damage this week. Cotton aphid and spider mites were still detectable in southern Hale, but at barely detectable levels and did not trigger any official leaf counts or ratings. Cabbage loopers were a consistent find between 1,000 and 1,500 worms per acre in non-Bt fields this week with just a few beet armyworms added occasionally. No fruit damage was noted alongside the looper or BAW larvae.



So far the looper and BAW damage has been limited to light foliar damage.

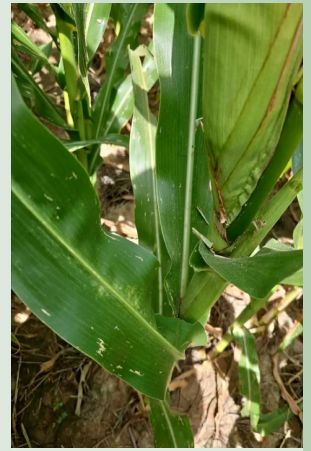
Corn

Our PPM corn ranged in stage from V6 through early dent stage. All of our young corn was V6-7 and our older corn came in mostly around dough. Corn is still behaving like a sink crop for the vast majority of the area bollworm / corn earworm population. Here, the caterpillar's cannibalistic nature usually prevents them from becoming truly economic in field corn with only one 'champion' worm per ear resulting from huge egg lays and otherwise intense pressure which typically limits damage to just the tip of the ear. In recent years we have noted that the 'resistance' or 'tolerance' to the older Bt toxins in two traited corn hampers this cannibalistic nature. In these cases, multiple worms can establish per ear as the worms do not move about the ear tip nearly as much and often feed farther down the ear. This often results in more ear damage from earworms to older Bt toxin corn than to non-Bt conventional lines. Those lines that contain VIP as a third Bt toxin should still kill most earworms attempting to feed on the ear or kernels. It should be noted that these older toxins were not designed to control earworms but rather corn borers. And while we are monitoring the level of control offered against corn borers by these traits nationwide, control still seems more than adequate here in Hale and Swisher to date. While earworms would be nearly impossible to control in field corn under typical field corn economic situations, our area corn is between silk and hard dough stage, it will be attractive to them as their primary host. We should also understand that if you have just the older two toxin corn traits in your varieties, you are very likely to incur higher earworm damage than conventional lines and certainly more than lines with the VIP trait.



One of several CEW venturing past the tip of this ear of SW Swisher corn line expressing only the 2 older Bt toxins and no VIP trait.

The other or 'main' pests of corn seemed fairly quiet again this week. We have still not seen any southwestern corn borers or western bean cutworms in our fields. The Banks grass mites did make some slight headway in our fields this week under some drier conditions, but a plethora of beneficials are hindering them greatly. This week all older fields had some level of mite pressure, but this pressure only ranged from 0.2-1.6 on our 0-10 damage rating scale with 3.5-4 being threshold. No notable increase in any disease was noted.



The highest any BGM colony reached in our data sets this week (NW Hale).

Sorghum & Millet

We have not been able to scout our sorghum fields this week, but we were only able to get to some of them



Stink bug cluster in our sorghum last weekend.

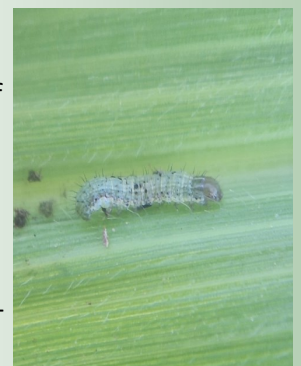
last Sunday. At that time, our sorghum fields were clustered around early dough with not very many fields showing any grain color yet. Our largest concern going into those fields last weekend, and likely this weekend, are the sorghum aphids (pest formerly known as the sugarcane aphid ((SCA)). To our surprise, the population had decreased with multiple colonies failing to establish. This is for our fields only. We have reports in the area and in nearby counties of populations in the thousands per leaf and more typical of what this pest is capable of. We will be watching these populations closely, but our most concerning pest in our fields was actually

stink bugs with nymphs clustering on heads. The best data we have indicate that the threshold should be around 4 per head during soft dough and increasing to around 16 per head in hard dough. With one large cluster making up most of the population, our highest field held 1.37 stink bugs per head. No other pest were of note in our sorghum.

Our millet fields are in an early to mid-whorl stage. We are picking up some fall armyworms and a few headworms (CEW/bollworm) in a few of our millet whorls. In several of these we are also finding a decent population of corn leaf aphids. These aphids should of limited damage potential in millet and should be helping build beneficial populations. None of these pests were nearing economic levels.



CLA in a SW Hale millet whorl.



CEW on millet in SW Hale this week.

Texas A&M 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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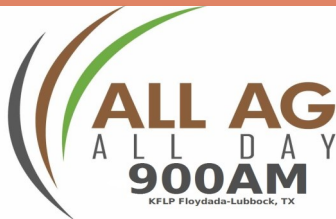
PEST PATROL

BLAYNE REED
 IPM Extension Agent
 Texas A&M University



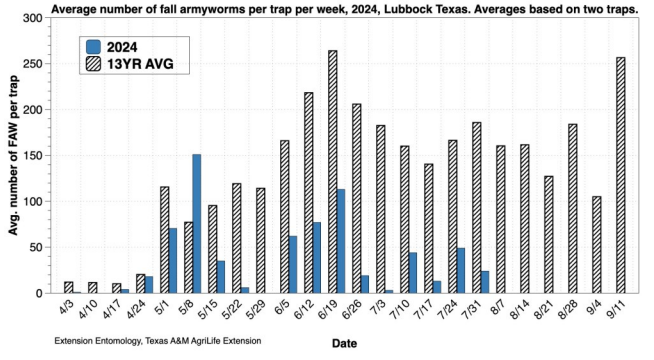
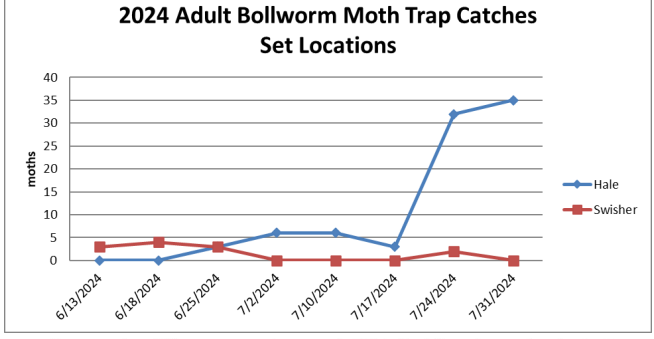
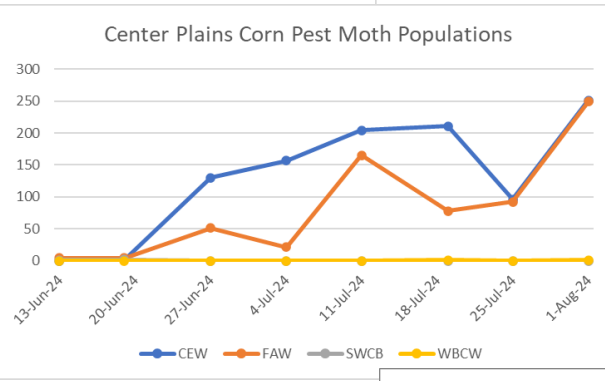
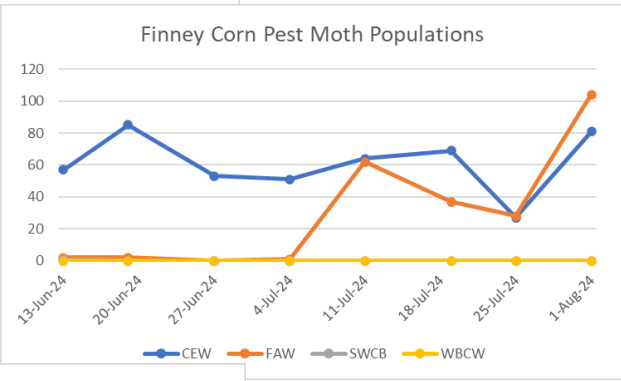
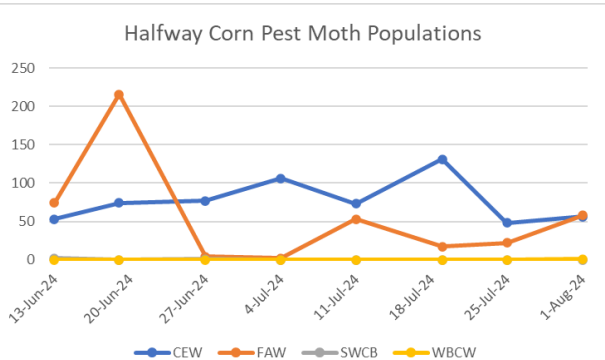
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Blayne Reed



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