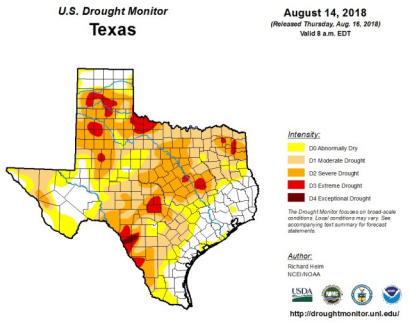
TEXAS A&M AGRILIFE EXTENSION

Plains Pest Management News

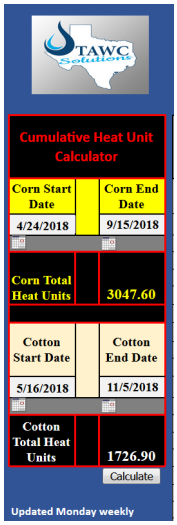
AUGUST 17, 2018

General Status

Rain showers crisscrossed the region again in the past seven days bringing much needed moisture but unfortunately for several hotspots it came with severe and damaging weather too. With the best information I have, every corner of our three counties got at least some measurable moisture. In very few cases was it enough to impact NOAA's drought monitor with the driest areas still getting the least moisture while a few other localized areas got a brief deluge. The various hail



cores that put evil shadow across the area were small but very violent. Acres along the Hale, Lamb line were lost or damaged and areas east of Tulia, near Kress, and toward Finney received serious and debilitating damage to some fields and marred others. All spotty weather events considered, which does include some very expensive personalized August zeroing out, it does look like a net gain in setting and filling bolls and finishing and filling grain.



Pests this week were moving in one of two ways too. Either fields are nearing their zenith in pest and insect activity, or they were crashing to near immeasurable levels, moisture depending. Lusher and younger fields have a much to watch for and likely take care of. This looks to be more than many of us have seen in our production field for many years. Others are maturing out and moving toward quicker maintenance scouting and inputs. I have even noted some corn being harvested already. With some of the earliest July cut-out cotton fields considered, it is possible we could be talking bollworm treatments and harvest aids in the same week sometime soon.

Light to moderate hail damage east of Tulia this week. Knocked off bolls are the beginning of yield loss. Damaged bolls have open wounds and could be stained or rot. Early applied bollopeners might be a consideration in taking the best of a bad situation in the next 5-7 weeks.

Cotton

With rain muddying fields and roads this week and a research schedule at peak, we are behind in scouting our program fields this week. Many of our 'prime pest suspect' and lusher fields have scouts going across them as I write today and possibly over the next few days. With that, I estimate that 85-90% of our program fields are in absolute cut-out with about 5% having no more squares to set in to bolls. Of the few that have not reached 3.5 Nodes Above White Flower (absolute cut-out) most are between 3.5 and 4.2 NAWF with one late field at 6.2 NAWF. I would also estimate that only about 4% have now developed their uppermost bolls so that bollworms would have a very hard time establishing. This leaves 96% of fields still at risk for economic bollworms and plant bugs. This includes all Bt technologies. Despite the vast majority of fields still being at risk for pests, I estimate a slight majority of our fields are actually falling into the lower insect activity group with pests and beneficials focusing on the lusher, younger fields making the 'line' of insect activity even starker. With the available population of moths looking for acceptable hosts, they could eventually decide to settle, so vigilance is the best scouting tip of the day. For both Bt and non-Bt cotton fields, the ET remains the same at 8,000 – 10,000 bollworms per acre or 6% harvestable fruit damaged by bollworms.

A lush south-central Swisher field this week. CEW moths flutter continuously and eggs can be spotted easily in scouting, yet this Bt trait and beneficials are holding below ET.

This in-field pest activity, mostly made up by bollworms and predators, was both higher than we have seen in many seasons (last year included) and so low it could not be measured. I cannot understate that the lusher and younger fields are harboring a large and continued bollworm egg lay while a remarkable beneficial population continues to push back in our favor. So far all of our program cotton fields were held below ET or were unattractive to the moths, but my most 'suspect' fields are yet to be scouted. Our scouted highest scouted egg population was 36,750 eggs per acre, but held less than 500 small worms. In the area, I have an accumulating list of scattered fields reaching ET this week and requiring treatment. I will be surprised if we do not find at least 1 field to add to that treated 'club' yet. There remain many fields, even non-Bt, that have not reached ET for bollworms yet due to several factors with predation being chief among them.

View from a central Hale field with decent boll load, is still at risk for several pests, but held very few insects and no worms or eggs this week.

Of our few non-Bt program fields we have had to treat, our non-pyrethroid treatments gave us outstanding control of 98.7% or better while salvaging most predators to mop up any survivors. These products come with some added cost over pyrethroids but were lusher fields with a higher yield potential. I might consider risking some lower level of control from pyrethroids due to pyrethroid resistance in the worms in a lower yield potential situation that needs a bit of help to get past this moth onslaught if no secondary pest, such as aphids or spider mites are a concern. These at-risk fields seem unattractive to the worms so far, but that can change if the worms are forced to 'settle.'

A southwestern Hale field this week. Small plants still setting all the squares into bolls they can.

We found a few more fields with Lygus this week than in weeks past, but all were well below ET. Stink bugs continue to pop up in about 1 in 5 fields and no aphids were found. With cooler temperatures, the mites we are seeing in our cotton dropped in the already mild severity. Beet armyworms, true armyworms, and cabbage loopers continue to show between 2,000 and 9,000 worms per acre in our non-Bt fields. There are none of these worms in any Bt field. As foliage feeders, it should take about 50,000 of these species combined to reach ET. We noted some increase in leaf spot in one of our western Hale cotton fields that is worth looking into more and keeping a close eye on. Most fields show some leaf spot as days get shorter and cooler and cotton finishes out in late September and October. An onset earlier can seriously cut into yield and fiber quality, as was the case for many fields last year.

A canopy view of our field that has notable leaf spot this week.

Bollworm egg on a leaf

An older photo of BAW feeding damage, sometimes referred to as a 'hit.'

Bollworm efficacy trials update…

The only update I have this week comes from our BCS Sentinel plots near Aiken in Floyd County. In this trial are non-Bt, TwinLink, and TwinLink Plus cotton plots. We are counting 50 plants in each plot and recording fruit damage and surviving worms. In these plots, our bollworm activity doubled again from the previous week, which was increased remarkably from the previous week. These plots, being on drip and very lush with high yield potential, also have the blessing of a healthy and very active beneficial population too. With approval from BCS, here are this week's condensed numbers on how these traits are fairing under this population of worms and this situation:

	non-Bt	TwinLink	TwinLink Plus
% plants with damaged bolls	38%	22%	10%
% plants with damaged squares	30%	8%	12%
% plants with damaged blooms	12%	10%	0%
% plants with damaged fruit TOTAL	80%	40%	22%
% plants with live bollworms	**24%**	**8%**	**0%**
% plants with foliage feeding worms	6%	0%	0%

Corn

This week our two corn fields developed past economic insect damage and shown a starch line greater than 15% averaged across the field. Both had been successfully treated for spider mites several weeks back with only empty colonies found in all data sets. We were particularly watching the fall armyworm populations in these fields to see if they moved down the ear or to the base of the ear. Some did, but not enough to trigger a treatment. All earworm damage was higher than we would like, but within tolerable rates versus cost of spray, lack of solid treatment triggers, and difficulty in control once ear feeding has been established. Several corn diseases were noted affecting leaves this week that should not be economic as the fields dry down for harvest. Little fungal activity was noted on the ears of these fields so far.

Southwestern Hale image this week.

For later corn fields, CEW egg lay should be at an astounding level, but not likely economic. Careful scouting for FAW and western bean cutworms should be on high. As August rolls by with nights and days starting to get cooler, two-spotted spider mites would be the more likely species in infest fields. These mites do more damage pound for pound and are more likely to blow in and work the plant top to bottom rather than bottom to top, but the economic damage ratings of 0-10 will be the same as for Banks grass mites with 3.5-4.5 being a good ET level.

Sorghum

This week our program fields ranged from flag to dough with the majority of fields in early dough. The chief pest of concern again this week were the headworms, with about 99% of them being bollworms. None of our fields reached ET this week for this pest, but last week's treatments seem to have worked as well in our sorghum as they did in our cotton. Our seed milo fields last week averaged 1.2 small worms and 0.6 medium worms per head. Following treatment, these fields averaged 0.038 small worms per head with solid beneficial support. These treatments were made jointly for borderline sugarcane aphids in these fields. This treatment looks to have been successful also with SCA being hard to find in field again. There were also some yellow sugarcane aphids damaging lower leaves on most of those plants last week, which also look to be well controlled.

Some once SCA infested seed milo leaves now looking clean in northwestern Hale this week.

Our sugarcane aphid research plots in Halfway have exploded with aphid populations recently, yielding much good data to be shared soon. In this field, our untreated plots, which reached ET 2-3 weeks ago, are now averaging 900-1,400 aphids per leaf with plants in early dough stage looking near death. Just a few miles away on the Helms farm of the Halfway Station are other researcher's plots under our scouting and pest recommendation care. In those flag to bloom plots, SCA are still almost impossible to find with less than 1% of the plants infested with colonies still averaging less than 10 aphids. Such seem the insect population dynamics locally in 2018. Each field is at risk, but not all fields are 'in immediate danger.'

Nicole Keim, one of our 2018 PPM field scouts, takes a turn on some blanket SCA treatments with the backpack sprayer at Halfway this week for a seed treatment efficacy trial.

In our blooming sorghum fields, we are averaging between 0.08 and 0.2 midge per blooming head. Other early dough stage fields in our program were running 0.6 to 0.9 small to medium headworms per head with a similar battle ongoing between pest and predator as in cotton. These fields were not at ET yet, particularly for commercial grain at the current price level. We continue to find a few spidermites on most lower leaves of sorghum, but in the cooler, wetter situations this week, most colonies shrank in size.

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We're on the air…

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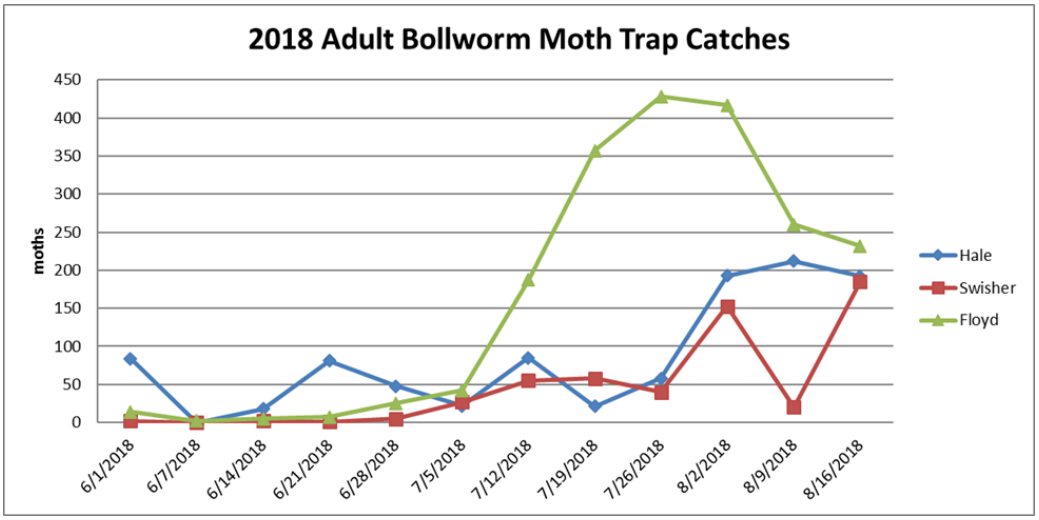
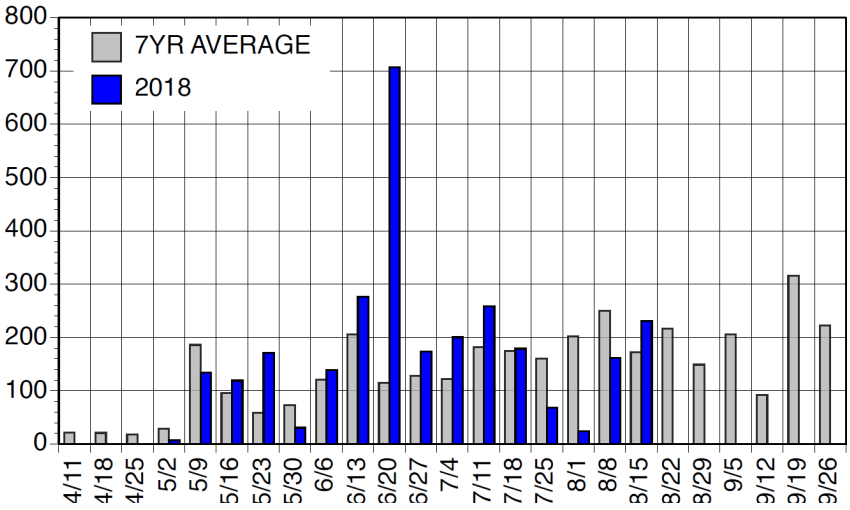
Check out our bi-weekly IPM update with the crew from All Ag, All Day—900 AM KFLP or 800 AM KDDD



Average number of fall armyworm moths per trap per week, Lubbock, Texas, 2018. Averages are based on two traps.



Blayne Reed