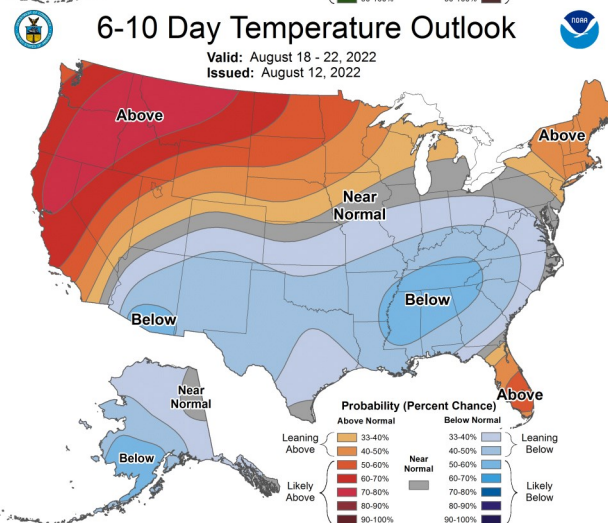
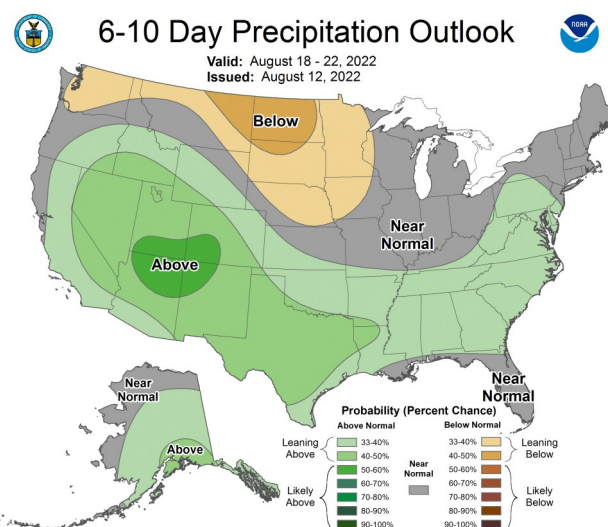
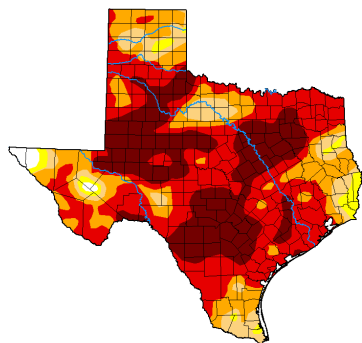


AUGUST 12, 2022

## General Status

It is sad to say that the last 10 days have been some of the wettest / moistest / coolest of the official summer season. Still, I estimate that only about half of our production fields actually received substantial moisture. Those that did, generally received at least 0.7-inches with a few select spots receiving multiple inch totals. The slight majority still received less than 0.1-inches as the clouds passed by. Believe it or not, any and every drop received was not too late for our surviving crops to benefit this year. Even the driest of our cotton fields in absolute cut-out for more than a week were still setting the last of their top crop and filling what bolls they have. Our lush cotton fields are still setting the heart of their crop. Our oldest corn and sorghum are finishing filling grain and our younger grain fields needed any moisture to make it through their whorl stages. I even dare say for the acres that did not receive substantial moisture are at least benefiting from some 'cooler' temperatures with hopes of their overstressed irrigation systems getting a touch closer to keeping up. That being said, we are a long way from being out of ridiculous drought conditions with insect pests chasing the moistest host plants available.



## Cotton

Our surviving Plains Pest Management scouting program cotton fields ranged in stage from a relatively young 6 nodes above white flower (NAWF) up to absolute cut-out ( $<3.5$ NAWF) with the very last blooms to be set for the season blooming this week. Most of our fields were hovering around the absolute cut out stage somewhere between 3 and 4 NAWF. Bollworms were our largest scouting concern with an increase in moth flights seeming to focus on the lush fields, but it was a pocket Lygus that caused our only economic issue that needed treatment this week. Most fields held some level of Lygus population, usually over 1 Lygus per 12 row feet. One of our already identified as a potential Lygus issue fields did stay lush enough to hold the flighty insects



Photo of the range in cotton conditions in the area. TOP: Lush field at 4 NAWF. Bottom: field that reached cut-out 2 weeks ago.



Lygys adult. Photo—Dr. Pat Porter

attention with 1 Lygus per 2.6 row feet. At this level, and for this field, the Lygus were causing enough fruit drop to warrant treatment. We should be very careful when treating Lygus this late in the season. With so many fields entering cutout stage under stress with natural drop being very high, it is very possible that even if Lygus were at this level they might only be feeding on fruit that the plant was already aborting due to the environmental issues anyway.



Cabbage looper found this week.

Bollworms did increase their cotton field presence this week, but all fields remained below the economic threshold (ET). Most egg lay and any subsequent bollworm establishment



Typical bollworm egg.

seemed targeted to the lush fields this week, even more than usual with fields having reached drought enhanced cut-out earlier holding very few insects at all this week. A noticeable beneficial population, also congregating into our lush fields, are very likely aiding in bollworm control so far. We are experiencing a sharp increase in moth activity so we will have to see if this activity leads to bollworm field issues and if these beneficials can keep up soon. A few other pest species are moving into lush fields, so far at sub-ET levels. We noted an uptick in stink bugs in these fields and beet armyworms and cabbage loopers in lush non-Bt fields.



## Corn & Sorghum



Typical BGM colony on the underside of a corn leaf.

Our only corn has entered late dent stage and is forming starch lines. Due to drought stress, it should be past economic pest damage. Spider mites, all BGM were moving solidly up the plant from desiccated leaves but were not economic for the late stage of development. Any field later than this should remain on high alert of this pest, even if the field has been previously treated.

We have reports of several area fields with populations that built back with the original treatment not fully corralling the pest for as long as was needed. If retreatment is needed, our 2022 mite efficacy trial has addressed this issue. We found that rotating chemistry and mixing light rates of 2 labeled but not utilized recently miticides is proving to offer significant control over untreated checks. No other pests or diseases of note were found in our corn.

Our older sorghum is in dough stage while all our younger fields are around V9-10 whorl stages. BGM have been an issue in our older grain sorghum also, requiring treatment 14 days ago. While a light population hovering around a 2 on the 0-10 official damage rating scale is still in field, this is greatly reduced from the 4.5 it had been triggering the treatment and has not increased since. We finally noted a sub-economic population of the sorghum aphid (formerly the sugarcane aphid) in our older sorghum. This population was infesting 18.7% of our plants with colonies all smaller than 10. For dough stage sorghum the ET for the Texas High Plains remains at 30% infested plants with colonies of 50 or more. Much of our sorghum aphid research conducted over the past 8 years indicates that once the sorghum reaches hard dough with colored grain across the head, the ET might increase to protecting the upper half of the plant from heavy or large colonies. For booted sorghum we should be on the lookout for headworms, especially since we have noted an uptick in headworm/bollworm moth flights, and sorghum midge. We have no blooming sorghum at the moment and have not found any headworms in our older sorghum.

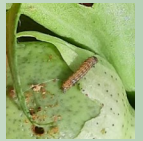
Our younger sorghum fields have a solid but sub-ET population of fall armyworms feeding in the whorl, especially the fields farther south in Hale County. While the vast majority of the plants in our fields have whorl feeding and a worm present, the percent foliage loss is still rated at less than 1% with ET currently estimated to be about 30%. No sorghum aphids or any other pests have been noted in any of our younger fields. Sorghum aphid ET for whorl stage sorghum is 20% infested with colonies of 50 aphids.



Photo of about 100 sorghum aphids



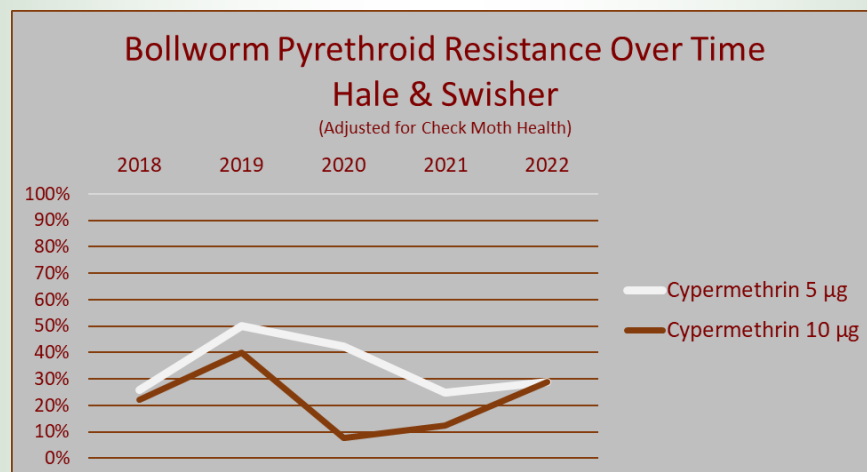
## Pyrethroid Resistance and High Plains Bollworms



For the past 5 years the Hale & Swisher IPM Unit has taken part in a State-wide bollworm-pyrethroid resistance evaluation. We try to track the level of pyrethroid resistance at this class of chemistry is among the most economical bollworm control available by far. This class of chemistry has also been around since the late 1970's. For at least the last 20 years the level of control offered by the entire class has become poor due to this resistance. The resistance situation may have even been exacerbated with the maturity of the product labels reaching the age where generics are now available. While offering additional price break, generic pesticides are notorious for large variations in quality and purity with labels only supported by a plethora of LLCs. With the pyrethroids being a non-selective insecticide, they have long been known to clear out beneficial populations while flaring secondary pests such as aphids. If bollworm control is not achieved with an ineffectual pyrethroid treatment, with all beneficials are removed, and aphids flaring, this quickly becomes a nightmare situation for fields with good yield potential.

So, where do we stand this year with pyrethroids? They certainly look very attractive in a tight year as 2022 is, if bollworms do require treatment. Keep in mind that for our trials, we are using latest name brand pyrethroid with the 5 $\mu$ g rate representing a maximum labeled field rate and the 10 $\mu$ g rate representing 2X the field labeled rate of pyrethroid.

Our moth populations gathered from both Hale and Swisher indicate that the best we can expect from pyrethroids this year is 71% control with this generation of moths about to lay eggs. That is a full 29% surviving the max field rate, and this year also the 2X field rate. Personally, I am very unhappy with any level of control that drops below 95%, especially if it flares secondary pests that must be treated at a higher cost later. Based on what I see here, I reluctantly recommend that we again avoid the use of pyrethroids for bollworm control in cotton or sorghum except for perhaps a dryland type situation where bollworms somehow were able to establish. Below are the local pyrethroid resistance levels from bollworms for both rates of pyrethroids since 2018. Perhaps if we continue to avoid pyrethroid sprays, the selection pressure will drop and one day this class of pesticides could return for effective control.





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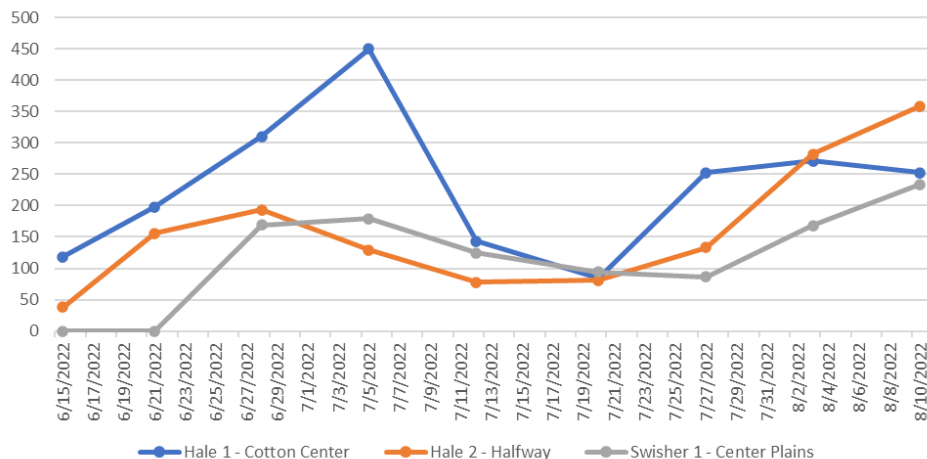
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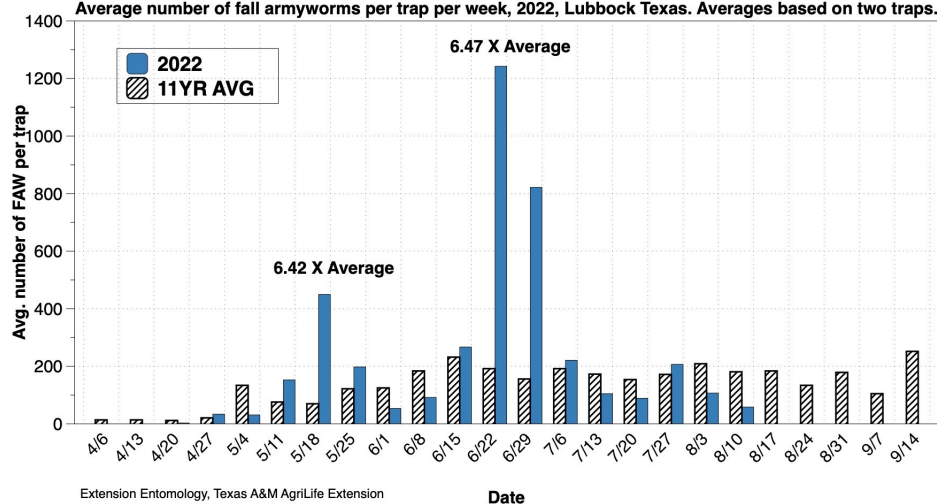


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Hale & Swisher County CEW Trap Numbers 2022



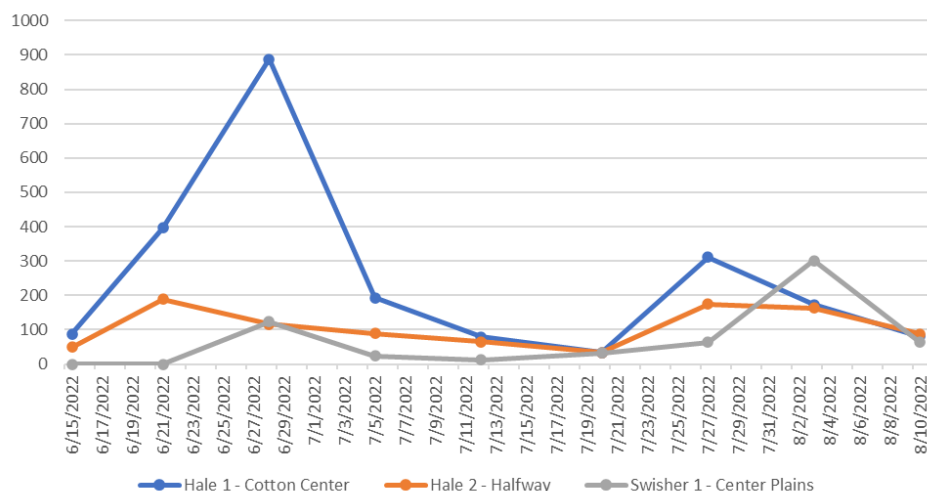
Average number of fall armyworms per trap per week, 2022, Lubbock Texas. Averages based on two traps.



Extension Entomology, Texas A&M AgriLife Extension

Date

Hale & Swisher County FAW Trap Numbers 2022



Blayne Reed