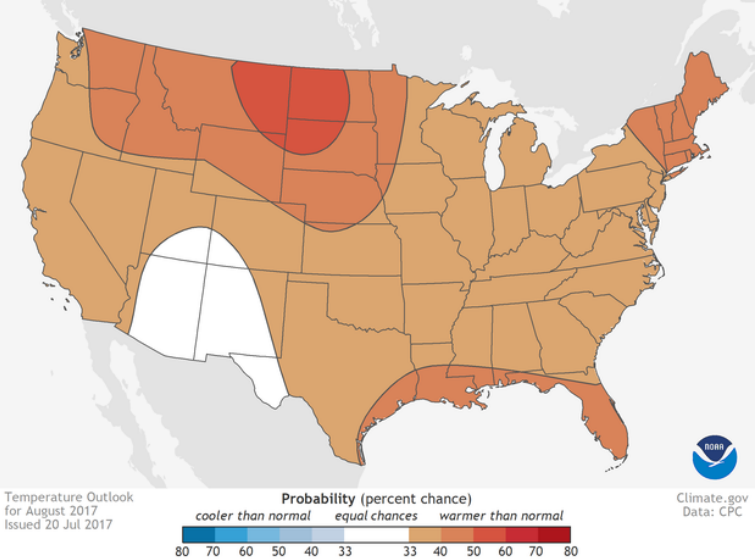
Texas A&M AgriLife Extension

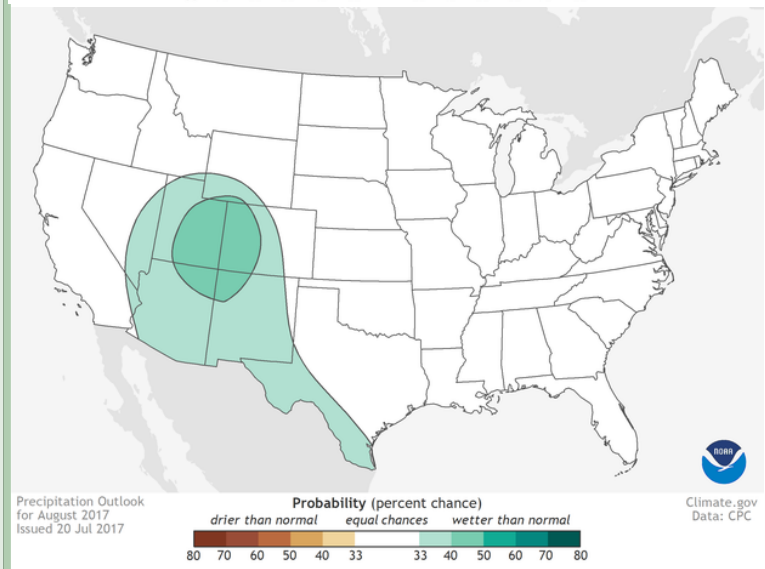
Plains Pest Management News

JULY 28, 2017

General Status

As par usual for 2017, field situations still depend greatly on which field you are in. Across Hale, Swisher, & Floyd we do not just have the good, the bad, and the ugly. We have the outstanding, the rank, the drought stressed, the pest ridden, the weather beaten, the chemically burned, the flooded, the weed patches, the recovering, the peak bloom, the nearing cut-out, and yes even the perfect. I am sure I am forgetting a few labels too. I also see plenty of fields are often taking more than one label. Yet somehow, I feel that our area crops in general are on a good course. Various management practices are going out and more needs are popping up for the various fields daily, but I feel they are on a good course nonetheless. And there are a lot of things happing in our area fields too. Weeds are proving yet again they will never quit coming while a myriad of insect pest made appearances this week. Some of these pests we have not heard too much from over the past few seasons but they are here now. Very few of these pests reached economic threshold in our PPM fields this week, but there are plenty of pest 'landmines' out there that could easily take fields out if we are not watching for them.





Cotton

Our PPM scouting program cotton this week ranged in stage from ½ grown square stage to a drought stressed and quick moving 4.1 NAWF (nodes above white flower). Most fields fell between 5.1 NAWF and 8.2 NAWF with really good recent fruit retention and boll set. We had no PPM cotton field reach ET for any pest this week. Lygus remained our largest pest of concern but was far from the only pest we found in our fields this week. Many of these other pests, I have not even mentioned in several seasons. I will list all pests found this week in chart form, followed by highest level found, and the recommended ET for each pest.

PEST	Highest level PPM found this week	ET
Lygus	1/6.4' row and 12.4% fruit loss	1/2.5' row and 10-35% fruit loss (stage depending)
bollworm	3,675 eggs and 863 small worms / acre and <1% fruit damage	8,000-12,000 worms / acre or 6% fruit damage
beet armyworm	736 / acre and no fruit damage	50,000 / acre or 6% fruit damage
cabbage looper	972 / acre and no fruit damage	50,000 / acre or 6% fruit damage
cotton aphid	0.016 aphids per leaf	50 aphids per leaf (12 per leaf W/ open cotton)
stink bugs	1/24' row and 11.7% fruit loss	1/3.5' row and 10-35% fruit loss (stage depending)
fleahoppers	1/9' row and 6.4% fruit loss	1/1.5' row and 10-35% fruit loss (stage depending)

Lygus were in about 70% of our fields at some level while bollworms were found in around 15%. There were a few Bt fields where worm damage was noted, but no worms found indicating some activity on what are likely a leading edge of migrant worms moving up from the south where they were troublesome in several crops and several Bt technologies. Beet armyworms were in more fields than bollworms, but still a minority. Beet armyworm feeding was also noted in Bt fields but control again look superb. Cabbage loopers were rarer with only 2 finds in field with Bt control again looking good for this species. The cotton aphid find was a single colony in a single field that 'joyously' initiated the extra leaf counts for this field scout. Stink bugs were in around 10% of our fields but no pattern was noted nor was there much damage associated with them yet. Fleahoppers were only a pest this week on the latest fields not yet blooming.

Medium sized bollworm in bloom-tag. Photo by Dr. Suhas Vyahare, 2016.

Beet armyworm damage to cotton leaves.

One of our biggest management decisions in cotton this week revolved around Plant Growth Regulators. We did have several fields require treatment this week. With this in mind;

PGRs – what they are and what they can and cannot do.

First off, PGRs certainly do not increase lint yield in and of themselves. PGRs are synthetic plant hormones, period. Gibberellins are the most utilized or targeted plant hormone in most PGRs. Naturally occurring gibberelins regulate vegetative growth and promote cell division and expansion. With larger synthetic applications of PGRs, gibberelins are reduced in the plant for a time, which then prevents the newly developed and developing cells from elongating to their full potential length during rapid growth periods when water is abundant. In essence, PGRs can prevent cotton, a true tree by nature, from rapidly growing and competing to become the tallest tree in the forest. This can leave a more uniform and compact plant that can have a more desirable and uniform balance of vegetative and reproductive growth in cotton. This can focus a cotton plant, who as a tree thinks it has 200 years to live, from getting too tall in vegetative growth for our purposes. This now potentially shorter and humanly desirable plant has the potential of being more efficient in retaining and maturing fruit faster, especially if heat or other stresses occur later in the growing season.

Northern Hale field that received a recommended PGR treatment this week.

There were quite a bit of 'potentials' and 'cans' in that previous paragraph (just in case you didn't notice). The bottom line is this. Cotton plants left to themselves in 'good' conditions will grow away and become 'rank.' Cotton plants will always be quite selfish. Cotton will sacrifice its fruit to save its self every time there is stress because it is a tree that thinks it has years of fruit production a head, not the few months we know it has. A shorter cotton plant has more potential to be more efficient in fruit retention and maturation than a taller, 'rank' plant does. PGRs, with over 30 years of research trials and use on High Plains cotton, have proven to keep developing cells (primarily in the forming stalk at the growing point terminal) from elongating to their full potential length. Once the synthetic hormone (PGR) runs out, any new cell development is not affected. To affect additional cells developing later, additional PGR treatments would be required. If applied at the right time, rate, and conditions, PGRs can keep plants shorter. If PGRs are applied to already stressed cotton plants, it can be disastrous.

The right time to apply PGRs to cotton (if needed) is when growing conditions are good for young cotton or cotton with plenty of vegetative growth potential with ample available soil moisture and fertility. Remember, PGRs cannot shrink a plant that is already taller than we would like and never apply PGRs to cotton at or nearing cut-out or currently or nearing stress of any sort.

Corn & Sorghum

CEW were in 100% of our checked ears this week. They should be of no economic concern, only damaging the tip.

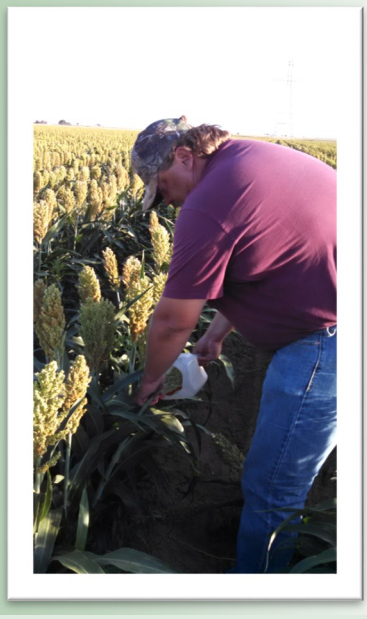
This week our PPM corn fields were V8 – 9 and dough stages. There is still very little happening in our late corn, minus a touch of common rust starting out. Even the bollworms are strangely absent from this whorl stage corn. In our normal planted corn, bollworms (CEW) are now in 100% of the checked ears this week but we did not note any fall armyworms (FAW) among them and we have not noted any western bean cutworms yet this season. The Banks grass mites (BGM) continue to edge toward ET over some moderate to good mite specific predators. This week the BGM rating increased to 2.31 from 1.28 on our 0-10 damage rating scale with a 3.5-4 rating being ET. I would 'guestimate' that this field has a 50/50 chance of reaching ET for BGM over the crucial next 3 weeks. I have noted this field being slightly behind several area corn fields. With this being the case, I would suspect there could be many area fields at or above ET for BGM right now.

BGM increased this week. Most colonies were thriving under bends and folds of mid-height leaves under extra cover.

Our sorghum ranged in stage from V9 to soft dough. Earlier this week we released on our blog about the sugarcane aphid (SCA) being found in Floyd and eastern Hale. I can now state that we have the aphid at our research plots at the Halfway station in western Hale, but several fields in northern Hale & southern Swisher not yet infested. These infestations are very light, with only 1-15% of the plants with colonies with the colonies consisting of only 1-72 aphids with less than 9 being the normal. Of those 9 SCA, usually 1-2 would be winged and the rest newly born nymphs. This is not ET, even for whorl stage sorghum yet, but certainly need watching. We all know how this aphid can 'turn it on.' I repeat, the reports from the south indicate the aphid never did 'turn it on' "fully" this year. Hopefully that trend remains.

2015 photo of SCA by Dr. Pat Porter

Despite the seriousness of the SCA threat and need to dominate headlines, there are several other pests in our sorghum, some with much more pressing economic threats. The first on my list is the yellow sugarcane aphid (YSCA). Mentioned here last week that the YSCA were actually over ET in several dryland sorghum fields, but



Checking for headworms and sorghum midge with a beat-bucket, 2014.

without a rain, treatment could not be justified. Those fields are still in that tough situation having not received any moisture. If these fields receive enough of the forecasted moisture, I may well regret allowing the accumulation of more YSCA damage. Without moisture quick, saving any leaves of sorghum in this situation seems pointless. Hopefully any irrigated fields in the area with similar YSCA pressure have already been treated. We have a few PPM irrigated sorghum fields with YSCA just below ET. Now with the SCA adding to the aphid trouble, it might not be long before treatment is justified. As a quick reminder, we have data from 2015 that show products labeled for SCA control, also work very well on YSCA and greenbugs.

2015 photo of overwhelmed beneficial shortly following the SCA arrival that year. Photo—Dr. Pat Porter

We are also finding a few headworms in our dough stage sorghum. Our heaviest field only had 12.5% of the heads infested with small headworms, of which none were FAW. Most fields held 0-2.25% headworms. The ET for headworms in sorghum is very dynamic depending on variable like market price, control cost, and plant stand per acre. The link to our sorghum headworm calculator is here: http://bug.tamu.edu/apps/sorghumheadwormcalculator/index.html. The threshold for most situations should be 1-3 small worms (less than ½ inch) / head or around 0.8 large worms (over ½ inch) / head.

2015 Hale County photo of a beneficial population that was left free to build that eventually finished the SCA following treatment.

Banks grass mites also increased seriously in our sorghum fields this week. We found BGM in 100 % of our fields with damage ratings of 0.2 – 1.9 on the same 0 - 10 scale utilized in corn with 3.5 – 4 being ET. In the sorghum, we noted much fewer mite specific predators than in the corn. On the plus side, mites and SCA do not seem to share space well.

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For quicker pest alerts-

Plains Pest Bugoshere:
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Pest Patrol Hotline, registration at:
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We're on the air…

"Tuesday's with Blayne" from 6:30—7:00 AM on the HPRN network on 1090 AM KVOP-Plainview.

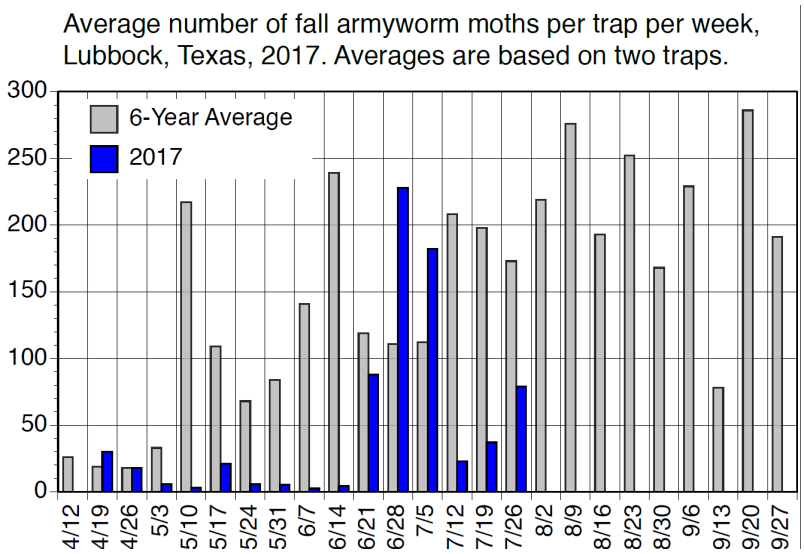
"IPM Wednesdays" from 1:00-2:30 PM on The FoxTalk 950 Ag Show. FoxTalk 950 AM - Lubbock.

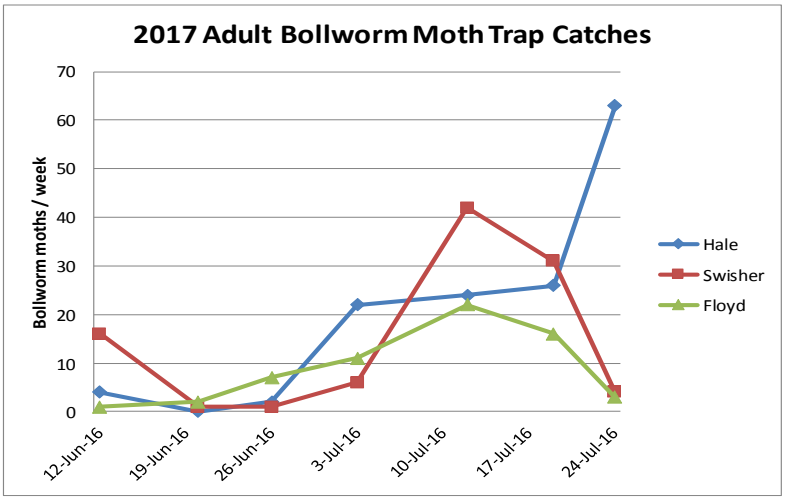
The only place we are finding FAW is in whorl stage sorghum. Currently our fields are running about 1-2% infested whorls with <1% foliage damage. 30% foliage damage is ET for whorl stage sorghum.

For any sorghum pest reaching ET, I urge producers to salvage beneficials with every treatment decision. They aid greatly in keeping the SCA to a one GOOD treatment pest. I rate the current beneficial population in sorghum as light, zero has proven to be a big problem in SCA control.

Here is the link to our video on scouting for headworms: https://www.youtube.com/watch?v=Exki0Veiu9Y&t=61s

Here is the link to our video on SCA scouting: https://www.youtube.com/watch?v=u6-H2EE3SUc





Blayne Reed