

JUNE 12, 2020

General Status

This week it has been hot, dry, and windy. On the days it was not, it was cold, dry, and very windy. In fact, we might need to replace our area flag poles soon, they are getting weak from being bent from the high winds a different direction almost every day. Likewise, our young summer crops are blowing in the wind, anchored to a dry soil. Last week's weather events either hailed on large sections of decently started crops or did not drop enough moisture to make a difference. Successfully established dryland fields of any crop are few and far between while our surviving irrigated fields are hanging on with most showing some level of weather damage. Thrips remain the only consistent pest of note while oddities such as grasshoppers, pillbugs, false chinch bugs, and cutworms all continue to move on certain isolated irrigated fields in the area,



Two cotton fields surviving different weather events this week.

Plainview Heat Unit Calculator

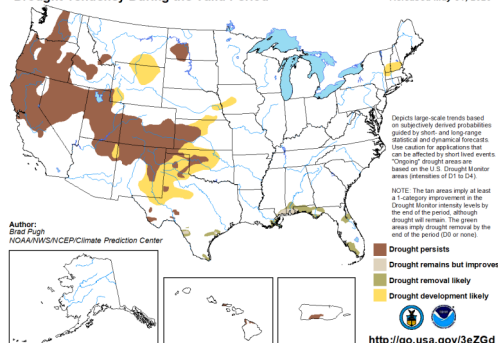
Cumulative Heat Unit Calculator		
Start Date	Corn	End Date
4/20/2020		9/20/2020
Total Heat Units	1054.65	
Start Date	Cotton	End Date
5/10/2020		10/10/2020
Total Heat Units	392.35	

attacking the only green

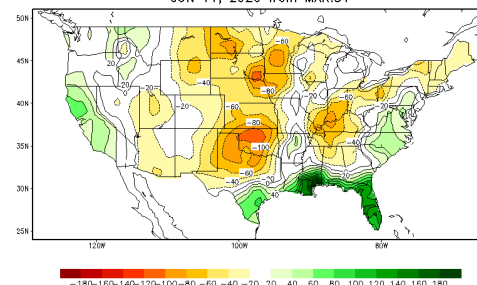
plants in the vicinity prompting a few emergency control actions. Winds and even legal issues have delayed many herbicide treatments allowing some weeds and fields to develop past ideal control windows adding to the oddest start to a growing season most can remember.

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for June 2020
Released May 31, 2020



Calculated Soil Moisture Anomaly Change JUN 11, 2020 from MAR.31



Cotton

This week our Plains Pest Management scouting program cotton ranged in stage from cotyledon to pinhead square with most of the older (or perhaps less damaged) cotton being more consistently across southern Hale with the later (or more damaged) covering much more territory. The majority of our fields were between 2nd true leaf stage or regrowth to 4th true leaf stage. While most of us have already determined the future of our damaged fields, this ‘regrowth’ stage is a tough one to assess. Should it be kept, or not? How quickly will it recover? What kind of yield can we expect?

‘Regrowing Cotton’

The bottom line on assessing these heavily damaged cotton fields is determining the surviving plants per acre (PPA). If we have at least 27,000 PPA surviving for irrigated, or 15,000 for dryland, our trials and experience shows we would be ahead to keep the field rather than taking insurance or re-planting an alternate or even late crop. This includes situations like this one in the photo, where all leaves and original growing point are gone or dam-



aged beyond repair. Most times it takes a few days before you can determine whether or not a plant has survived. If it has, it will start to show regrowth from some type of growing point, often an alternate one such as a lower vegetative branch that will now become the mainstem. Meanwhile, plants without a still healthy growing point will fade quickly, including those that might originally still have a leaf or cotyledon still attached. Without a growing point, the plant is dead to us. Here is a link to a blog article written a few years ago that covers how to determine accurately surviving cotton PPA, including how much to measure for 1/1000th of an acre for your row spacing: <https://halecountyipm.blogspot.com/2017/06/taking-cotton-stand-counts-getting.html>

So, how is it possible this heavily damaged and now regrowing plant is better than starting over and how long will this regrowth take to ‘catch up’ or recover? This is difficult to say but... let’s look at it the best we can. This plant we are using as an example should have been at the 4th true leaf stage this week. Now, it is essentially back to sprouting its 1st true leaf. From 1st true leaf back to 4th true leaf should take in good growing conditions 7-10 days or so. We can then assume the plant is a flat 10 days behind if we only have one type of damage. Let’s give the plant an extra 5 days on top of that to heal and redirect some xylem and phloem lines and I would say that 15 days is a good standard. But, remember that the plant already has the root system

system of a 4-leaf plant. That can trim about 25% off the recovery time. Consider that now there might be multiple growing points and we increase new vegetation faster and thus leaf area faster. This can reduce recovery time 5-10% farther.

But wait, we need to be putting on squares soon. If left undamaged, this plant likely would have started squaring by the 6th or 7th true leaf. Wont this add to the recovery time? Sometimes, but what we often see are that by the 4th regrown leaf from an alternate growing point, the plant is more likely to go into reproductive mode. While this doesn't technically reduce 'recovery time' it is a 2-node shortcut damaged plants often take once the xylem and phloem are redirected and the plant's juices are flowing well. So, if our field was that flat 15 days late due to damage and having to regrow from an alternate growing point, and we add all the potential to speed recovery time, our plant might only reach bloom 5-10 days later than it would have already. Now, it may have a very odd growing pattern, could be harder to strip, will be harder to identify PGR, irrigation timings, and termination needs but essentially, if there are enough surviving PPA remaining, the field is only losing 5-10 reproductive days.

That is in fact less time than it would usually take to replant a field under real world situations, let alone have that crop reach a comparable growth stage. So, our surviving early season damaged plant regrowing from an alternate growing point can still have 4-5 weeks of affective blooming, assuming good conditions for the remainder of the season. Of course, I doubt anyone on this planet would guarantee growing conditions in West Texas. On the converse side, the next high wind event or hail stone could drop the barely surviving damage field with 27,000 PPA back to a disaster at any time. So, even though these plants can make up some of the lost time, conditions are not always ideal, and we should keep this in mind when making input decisions too. The key word is "profitability."



Thrips remained our main pest of concern for our PPM scouting program cotton. Pressure remained over average for the whole area but was highest in the northern zones closer to drying wheat fields. There were key indications that the massive flow of thrips in the area could be waning behind control treatment applications and some rains. Around 95% of our fields required treatment for thrips at least once, and around 35% have received 2 treatments. This week our numbers ranged from a few fields with nothing found up to 2.75 thrips per true leaf for a field not yet treated. Most fields fell between 0.2 thrips per true leaf and 0.8 thrips per true leaf behind treatments.





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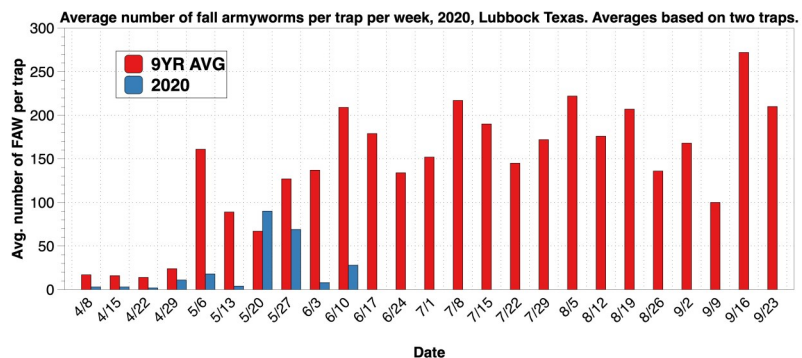
Beneficial populations in our heavily treated cotton are very light with only a few crab spiders and occasional minute pirate bug and predacious thrips. While none of the PPM program fields had any, there were several area fields experiencing the odd grasshopper, false chinch bug, or cutworm damage to cotton. While explainable in all situations, usually by the drought situations and surrounding crops/pasture/vegetation situation, these odd pest situations can be quite damaging, even field ending if left untreated. Each one will require differing control options, so proper identification of an issue is critical before fields can be lost.



Some of our older PPM Sorghum and Corn fields this week.

Sorghum and Corn

Our PPM corn and sorghum fields are handling the adverse conditions better than our cotton again this week unless irrigation capacity is already in question for corn. Our plant stages ranged from not planted yet up to V9 with established fields ranging from V4 to V9. Again, we noted no pest of issue this week. A few diseases are in-field but at low levels. Weed control and making herbicide treatments in a timely manner under high wind situations are our biggest concern at the time.



Blayne Reed