



Blacklands IPM Update



GENERAL:

The area wide soaking we have been hoping for, finally arrived earlier this week. The recent rains will help wheat finish out the crop and keep the corn and cotton crops growing. Rust in wheat is picking up across the area after the recent rains and will likely continue to spread for the next few days. The corn crop is growing nicely given the weather pattern we have been in, but the looking at the bright side of low spring rains is it caused the roots of the plant to dig deep into the soil for moisture. These deep-rooted corn plants will be less susceptible to moisture stress later this summer as they can access what deep soil moisture we have and may build up in the coming months. Cotton planting has wrapped up, but a few people are still replanting some fields that did not emerge very well. Emergence issues are evident in just about every field I have looked at, but some are worse than other, and it appears to be more soil moisture issue than variety. Thankfully, insect pest issues at this time are not a major concern but we do need to keep our eyes on the thrips populations, aphids, and spider mites which I can find in every field I have scouted. Weeds are starting to emerge following the recent rain event, and the next few days will be the optimal time for herbicide applications, so you can treat the weeds before they get too tall and hard to control

WHEAT:

Wheat across the area looks good giving the year, and the recent rain event is probably all the crop needs to finish out to harvest. Leaf rust is becoming an issue following the rain showers Sunday night into Monday morning, and with rain chances this weekend we could see leaf rust continue to spread if fields are not treated. We are getting to the point in the growing season where fungicides are no longer labeled for application based on the crop’s growth stage and the amount of yield loss from leaf rust is minimal due to the growth stage. Most of the wheat I am looking at was in the soft dough stage this week and will likely be in the hard kernel stage within the next 10 days. Yield loss from leaf rust is dependent on the percent of the flag leaf infected and the growth stage. When wheat is in the soft dough stage yields can be reduced by 1 percent for every 10 percent of the flag leaf infected, so if roughly 70% of the flag leaf is infected with leaf rust at the soft dough stage there will be about a 7% yield loss (**Table 1**). If wheat has not reached the soft dough stage, it may be beneficial to evaluate and treat with a fungicide if leaf rust is likely to infect the flag leaf.

Table 1. Approximate percent yield loss caused by leaf rust based on crop growth stage and disease severity

Disease Severity (% of flag leaf diseased)	Growth stage			
	Flowering	Milk	Soft Dough	Hard Dough
10	10	2	1	1
25	15	5	3	1
40	20	8	4	1
65	30	14	7	3
100	35	20	10	5

Insect pest at this time is low, but I am finding some stink bugs and grasshoppers in area wheat fields that should continue to be monitored. Stink bugs are feeding on the developing heads, and can lead to decreased kernel weights. The economic threshold for stinkbugs in wheat is not set in stone, but it is recommended to spray when there is 1 stinkbug in 10 heads from flowering through the milk stage and when there are 3 stinkbugs in 10 heads from the dough stage to the hard kernel stage. Grasshoppers are also present in some area fields but are not causing anywhere near the amount of damage that would justify treatment.

COTTON:

Cotton is up and growing and off to a good stage for the weather pattern we were in leading up to planting time. There are some emergence issues as you move west and south in the area, which did not receive as much rain as areas east of I-35 and North of Hillsboro before planting cotton. The recent rains should help those seeds that are still viable to emerge, but I know some fields that have emergence issues that have been planted for three weeks now and seed viability is becoming a big concern. If you have poor stands, I would wait until probably Tuesday to start evaluating your stands, as this will give those seeds plenty of time to emerge if they are still viable. When evaluating stands you want to look at both the number of plants per acre and the uniformity of the stand in hopes of having skips no bigger than 1.5 feet between plants.

Insect pest at this time is present, but below the economic threshold. During scouting this week, I was finding thrips, aphids, and spider mites in all scouting program fields at levels below their respective economic thresholds. Thrips (**Figure 1**) are averaging less than 1 thrips per true leaf, and most of the thrips I am seeing are adults indicating that our insecticide seed treatments are still working. However, these insecticide seed treatments start playing out as you get to the 2 to 3 true leaf stage. Our thrips populations so far this year, have not been as bad as recent years and there are two reasons that they are not bad right now 1) our wheat is maturing later than normal, and thrips are not migrating out of area wheat fields yet, and 2) the number of wildflowers in roadside ditches are attractive to a lot of our western flower thrips currently. As these flowers start dying off or we start mowing roadside ditches they will quickly move into cotton fields to feed on the young tender tissue. Walking fields and just looking at the plants it looks like there could be a lot of thrips damage, but it is the leaves being damaged by our high winds. If we do get into a situation where we need to start spraying for thrips, they are easy to manage and there are several chemicals on the market that we recommend including acephate, Bidrin, spinetoram, and dimethoate if you can find it.



Figure 1. Adult thrips, commonly found feeding on young cotton plants. Photo credit: David Kerns, Texas A&M AgriLife Extension

Aphids are present in area cotton fields, but are currently well below the economic threshold, and our beneficial insects have not moved into our area cotton fields yet. Seeing low populations of aphid early in the year is not a bad thing as these aphid populations will attract our beneficial insects into the field. As input prices stay elevated, I would highly recommend preserving the beneficial insect population as much as possible to help keep other insect pests low. Spider mites are also present in area cotton fields, but currently are not that bad enough to spray. It is not uncommon to see spider mites on seedling cotton, especially when our weather around emergence is dry and warm. Most of the spider mite colonies I am finding are on the cotyledon leaves, that will soon be desiccating and fall off the plant. At this point in the season, we want to focus on keeping the true leaves as healthy as possible, so the plant can produce enough carbohydrates to set and retain squares early as possible. The economic threshold for spider mites is 40% of plants with noticeable leaf damage and the colonies are growing. Hopefully, we can get some more moisture in over the weekend which will have a negative impact on the growth of spider mite colonies.



Figure 2. Cotton Aphid. Photo credit: Kate Crumley, Texas A&M AgriLife Extension Service



Figure 3. Spider mites on cotton leaf. Photo credit: Kate Crumley, Texas A&M AgriLife Extension Service.

Blacklands IPM Update is a publication of Texas A&M AgriLife Extension IPM Program in Hill & McLennan Counties.

Authors:
Tyler Mays, Extension Agent-IPM Hill & McLennan Counties
Zach Davis, County Extension Agent-AG/NR

126 South Covington Street
P.O. Box 318
Hillsboro, Texas 76645
Phone: 254-582-4022
Fax: 254-582-4021
Mobile: 979-482-0111
Email: Tyler.mays@ag.tamu.edu

Educational programs of Texas A&M AgriLife Extension Service are open to all citizens without regard to race, color, sex, disability, religion, age or national origin. The information given herein is for educational purposes only. References to commercial products or trade names are made with the understanding that no discrimination is intended and no endorsement by Texas A&M AgriLife Extension Service is implied.