

BLACKLANDS IPM UPDATE

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GENERAL:

Corn harvest has started, and early yield reports have been very good. Most of the sorghum in the area is ready for harvest or close to being ready. Even though we are approaching harvest we do need to keep an eye on sorghum aphid populations to avoid excess honeydew causing harvest issues. Sorghum aphid numbers have started to increase in area fields that have not been treated, but we do have some beneficials around these colonies. Cotton is looking good for not receiving meaningful rains fall for the last 6-weeks and high temperatures. Fruit has started to shed due to depleted soil moisture, and will continue until we defoliate the crop, received meaningful precipitation, or the plant dies from drought stress. Aphids are still present in area cotton fields, but numbers are low across the field, with localized areas with heavy aphid populations. Stinkbugs are still controlled from our recent applications, but we need to continue checking for them for the next two to three weeks while we still have bolls that are susceptible to damage. I have started to pick up on whitefly nymphs in some area cotton fields, but thankfully their numbers currently are low.

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SORGHUM:

Sorghum is closing in on the finish line, but even though we are close to harvest we need to continue to scout for sorghum aphid. At this point in the growing season, we will not see yield loss from the sorghum aphid, but because they are prolific honeydew producers (**Figure 1**), they can cause harvest complications. If aphids are not controlled in time for the honeydew to dry before harvest, it can gum up the combine to the point where harvest must stop, and the machine has to be cleaned out with a pressure washer. To avoid harvest issues from the honeydew fields should be treated for sorghum aphid when there is heavy honeydew and established aphid colonies. When selecting an insecticide, it is important to review the pre-harvest interval for the products, as we do not want to use a product that is going to delay us from being able to harvest the crop. Products like Sivanto, Transform, Sefina, and alpha-cypermethrin all have a PHI of 14 days. Depending on how far you are from being able to harvest the crop should also be considered when choosing an insecticide. If you will be getting into the field shortly after the PHI is up you could get away with an alpha-cypermethrin shot, however, this product does not have very good residual activity. Transform, Sefina, and Sivanto all provide residual activity, but the residual activity of Sivanto has been better than Transform or Sefina.



Figure 1. Sorghum covered in honeydew caused by a severe infestation of sorghum aphids. Photo credit: Pat Porter, Texas A&M AgriLife Extension.

COTTON:

Given what the area's cotton crop has been through over the last 6-8 weeks, the crop looks good. As anticipated plants started really kicking square and small bolls off the plant over the last 7-10 days. This is due to the plant adjusting its fruit load to what resources it has available. As our soil moisture continues to deplete, we will see plants continue to show signs of drought and heat stress, but also nutrient deficiencies as the plant starts moving nutrients from leaf tissue into the developing bolls. Another possible explanation for the small bolls being shed is the possibility of pollen sterility due to the recent sting of high temperatures.

Spider mites are present in area fields, but thankfully currently their populations are low and not widespread. Since stinkbugs were an issue the last couple of weeks, and fields were sprayed we need to watch the spider mite populations closely. Some producers were proactive when they treated for stinkbugs and included 2 fl oz of abamectin across the whole field or along end rows. Thankfully, at this time there are thrips feeding on spider mite eggs in area fields which are helping keep the spider mite population suppressed. If you use acephate or Bidrin for stinkbug management previously your risk for spider mites is high, because these products also killed the thrips populations and have no activity on spider mites. If bifenthrin was used to treat your stinkbugs, your risk for spider mite issues is reduced, because these products also have some activity against spider mites. Fields should be treated when 40% of the plants have noticeable leaf damage (speckling and/or reddening) with active spider mite colonies. Abamectin is likely the most economical miticide for cotton, but you can also use Portal, Zeal and Oberon in cotton.



Figure 2. Redding of the upper surface of a cotton leaf caused by spider mite colony.



Figure 3. Discoloration of the lower leaf surface and webbing caused by spider mite infestation.

Aphid populations remain low, but they are one pest we need to keep an eye on as we approach bolls starting to open. Currently there are fields that have pockets of heavy aphids, but when you look at the field the aphid population is rather small. Currently our threshold is around 60 aphids per leaf, but once bolls start opening that threshold drops to just 10 aphids per leaf. At this point in the growing season aphids will greatly impact both yield and fiber quality by feeding on the plant's resources it would otherwise be used to filling out bolls. Another issue with aphids in cotton is that they are heavy honeydew producers, and when bolls are open the honeydew can get on the lint and cause sticky cotton. Aphid treatments tend to be pricey to obtain good control, products like Centric and imidacloprid are labeled for cotton aphid, but depending on population and canopy size may only provide suppression at best. Products like acetamiprid (Intruder), Transform, Sivanto, and Sefina can provide excellent control of aphid populations. Carrier volume can also impact the effectiveness of insecticide applications. At a minimum application should be made at 10 gallons per acre, but if the canopy is dense you may need to increase the volume closer to 15 gallons per acre to get good coverage of the canopy.



Figure 4. Cotton leaves cupping downward due to cotton aphids.
Photo credit: Clemson University - USDA Cooperative Extension
Slide Series , Bugwood.org

I have started to pick up on some banded wing whitefly in some area fields. Currently their populations are light, and well below the economic threshold. Banded wing whitefly are small fly like insects that have a yellow body, and white wings with grayish bands (**Figure 5**). This insect feeds on the plant sap using the piercing sucking mouthparts of the nymphs. The nymphs or immature stage are scale insect that can be found on the lower leaf surface, typically near one of the leaf veins. Banded wing whitefly nymphs are flat and oval in shape, with a fringe of hairs along the margins (**Figure 6**). This insect can be a major issue in cotton by feeding on plant resources that would otherwise be used to fill out bolls, and by causing sticky cotton due to honeydew production. For banded wing whitefly the economic threshold before bolls open is 50 nymphs per 5th mainstem leaf below the terminal, however, once bolls are open the economic threshold is only 25 nymphs per leaf. There are several insecticide options if they do increase to economically damaging populations in area fields. These products include acetamiprid (Intruder), Centric, Sivanto, imidacloprid (Admire Pro), acephate, Oberon, and pyriproxyfen (Knack). The acephate, Oberon, and pyriproxyfen products will kill the beneficial insect and could lead to issues with aphids and spider mites.



Figure 5. Banded wing whitefly adults.
Photo credit: Ronald Smith, Auburn University, Bugwood.org



Figure 6. Banded wing whitefly adult and nymphs. Photo credit: David Kerns, Texas A&M AgriLife Extension.