



# Blacklands IPM Update



## GENERAL:

Wheat harvest is finally wrapping up for most area producers and I have yet to hear a lot of yield averages, just that yields were lower than expected. Corn continues to progress nicely, and most of the crop is past any major yield loss from turning off hot and dry. Southern rust is being found in McLennan County, and we need to keep an eye out for this disease in some of our younger corn fields. Cotton aphids and fleahoppers continue to be found in area cotton fields, that were not treated last week. Sorghum across the area is starting to head out with some locations starting to bloom and should be scouted for sugarcane aphids and midge.

## COTTON:

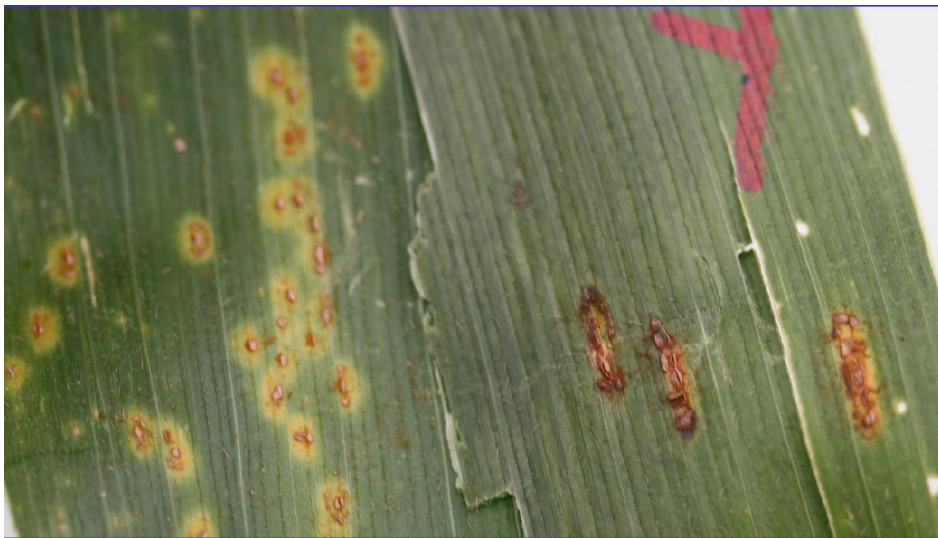
Most of the cotton in the area is finally starting to set squares and growing nicely thanks to the rains in May, or soils drying out a little bit, and warmer temperatures. There are some fields around the area that need a plant growth regulator application to slow growth and avoid excessive plant height that may cause harvest issues down the road. Plant growth regulators will not stop the plant from growing, but it affects the rate at which cells can expand leading to shorter internode lengths and shorter statured plants. They will not help the plant set more squares, but may help the plant retain squares, and often there is no yield benefit but can make harvest operations easier. For the few cents per ounce for mepiquat chloride a 4-8 oz/acre shot during squaring when growing conditions are highly favorable it can shorten the plants a bit and make harvest operations easier. Currently I am only recommending applications of 4-6 fl oz/acre based on the variety's growth habit, and additionally if we continue to stay warm and dry the PGR application at 8 fl oz/acre may be enough to stress the plant enough where it hurt the fields yield potential. If we catch more rains soon and environmental conditions remain favorable for crop growth additional applications of a PGR may be warranted and/or needed.

Cotton insect pest activity is still highly active and has increased over the last week. Fleahoppers are being found in most wheat fields above the economic threshold of 10-15 per 100 terminals, especially in fields that are squaring and have not been treated for fleahoppers during the last 7-10 days. Last week I had some fields treated with 4 oz./acre of acephate (Orthene) plus 2 fl. oz/ acre of imidacloprid, and some fields treated with 2 oz/acre of centric. Both mixtures appear to be working very nicely, and I have also heard of reports from the Brazos River bottoms of Bidrin plus imidacloprid working really good on cotton fleahoppers. Based on what our numbers are now and the population numbers I am hearing from the southern Blacklands and Brazos river bottom we could very easily need a second application, and on fields that have received the acephate plus imidacloprid shot the first time around I am think an application of centric on the second fleahopper shot may provide enough knockdown and residual to carry us through the window of susceptibility to fleahopper damage.

Cotton aphid populations are still increase in a few fields in the scouting program but are nowhere near the economic threshold. The economic threshold for aphids in cotton at this point in the growing season is 40-70 aphids per leaf, and I am currently finding some leaves with over 100 aphids but when I average these with the other leaves sampled across a field I am finding the fields averaging below the economic threshold. When treating for fleahoppers we need to be aware of if aphids are present in a field or not, especially if we are treating with acephate as this can flare aphid populations. Last week I had some fields that needed to be treated for fleahoppers, and had aphids in the field as well and elected to go out with the acephate plus imidacloprid treatment, and although imidacloprid is weak on aphids I am seeing some reduction in population and it will probably suppress the population enough for either weather to knock them out or our beneficials to move into the field and help keep their numbers below the economic threshold.

## CORN:

Corn is progressing nicely thanks to the warm weather drying out our soils from a waterlogged state making it possible for the plant to uptake the water and nutrients needed for development. Our weather conditions are no longer favorable for northern corn leaf blight development, but there is another disease we need to keep an eye on in corn. Over the course of this week, I have seen southern rust in the Taylor area, and received report of sightings in both Hill and McLennan Counties. In corn we can see two different rust the first being common rust and the second being southern rust. Common rust is typically around early in the season because it is favored by cooler weather, while southern rust typically is found later in the year around the pollination and grain fill growth stage due to it being favored by slightly warmer temperatures. Common rust is not a disease we are concerned about in Texas, as it rarely if ever has reached levels that could cause economic loss. Pustules of common rust are elongated in shape and brick red in color and will be found sporadically across the leaf surface. Southern rust pustules are an orange color and circular in shape and will be found in dense clumps of pustules on the leaf surface (Figure 1). If treatment is need will depend on multiple different factors that can affect the disease severity and potential for yield loss, these being hybrid susceptibility, growth stage, and incidence and severity of infection if present. Fungicides sprayed before the blister to dent stage to target northern corn leaf blight or southern rust will not provide long enough residual activity to protect the plant from economic yield loss if the environment remains favorable for disease. Additionally, fungicides are rarely justified past the hard dough to dent stage for southern rust as the potential for yield loss drops dramatically once the crop reaches the dent stage. Fungicides should be applied when 3-5% of the leaf area on the lower leaves of at least 50% of the plants are infected with southern rust. Fungicide selection is not a major issue, and even some of our cheaper products can provide good enough control of southern rust to prevent a large loss in yield. Tom Isakeit, Extension Plant Pathologist out of College Station has put together an excellent factsheet on southern rust covering identification, determining when to treat, and what fungicide can be used in Texas corn, and can be found at <http://counties.agrilife.org/hill/files/2021/05/EPLP-049.pdf>.



**Figure 1.** Visual comparison of southern rust pustules (left) and common rust pustules (right) in corn. Photo credit: Tom Isakeit, Texas A&M AgriLife Extension.

## SORGHUM:

Sorghum fields in the area are starting to head out with some higher elevations in fields starting to pollinate. With pollination going on now or quickly approaching area fields we need to keep an eye out for sorghum midge. The best time to scout for sorghum midge is in the morning up until about 10:00am, by beating flowering heads into a bucket and then counting the number of midge present. I currently have not seen or heard of any midge being found in Hill and Northern McLennan Counties, but they were high in the Brazos bottoms over the last two weeks.

The economic threshold for midge in sorghum is based on the cost of control, grain value, and number of flowering head per acre (Figure 2). Sugarcane aphids are also present in some area sorghum fields but remain below the economic threshold currently. The economic threshold for sugarcane aphids is based on the percent of plant infested with 50 or more aphids per leaf at different growth stages (Figure 3). If we are needing to treat for midge, we need to be cognizant of sugarcane aphid populations, as pyrethroids are usually used to manage midge in sorghum, and they can cause the sugarcane aphid populations to explode. If a midge treatment is needed and sugarcane aphid populations are approaching the economic threshold it would be beneficial to go ahead and include an insecticide for sugarcane aphid management to avoid need to treat for aphids a few days later. Sivanto is probably the best insecticide labeled for sugarcane aphids, but another product that can be used but not as effective as Sivanto is Transform.

**Table 17. Estimated economic injury levels for sorghum midge for a range of factors. (This table is only a guide. Use the equation in the text to estimate the economic injury level in your field.)**

Control cost, \$/A	Crop value, \$100 lb	Economic injury level—mean number of midges/flowering head		
		Flowering heads = 18,000/A	Flowering heads = 45,000/A	Flowering heads = 67,500/A
5	6	1.6	0.6	0.4
5	7	1.3	0.5	0.34
5	8	1.2	0.5	0.3
6	6	1.9	0.8	0.5
6	7	1.6	0.7	0.4
6	8	1.4	0.6	0.35
7	6	2.2	0.85	0.6
7	7	1.9	0.75	0.5
7	8	1.6	0.65	0.45

**Figure 2.** Economic injury level table used to determine when to treat sorghum for midge.

**Table 11. Action thresholds based on sorghum growth stages** (Source: revised from thresholds created by Louisiana State University)

Growth stage	Action threshold
Preboot	20% of plants infested with 50 or more aphids
Boot	20% of plants infested with 50 or more aphids
Flowering–milk	30% of plants infested with 50 or more aphids
Soft dough	30% of plants infested with established aphid colonies and localized areas <sup>1</sup> with heavy honeydew
Dough	30% of plants infested with established aphid colonies and localized areas <sup>1</sup> with heavy honeydew
Black layer	Heavy honeydew and established aphid colonies. Treat only to prevent harvest problems. Observe preharvest intervals for insecticides.

<sup>1</sup>: A single plant or group of adjacent plants with sugarcane aphid colonies

**Figure 3.** Economic threshold for sugarcane aphids in grain sorghum based on growth stage and percent

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