

## GENERAL:

A heat wave moved in during the latter part of last week, but thanks to our wet spring crops across the area have withstood the temperature stress. Most of our later planted cotton fields have go to the point where they are no longer susceptible to thrips, but fleahoppers remain an issue for area cotton fields. Sorghum is starting to flower except for a few late planted fields, and sugarcane aphids remain in check thanks to beneficial insects and the rain over the weekend. Most of the corn I have look at is in the dough stage, and corn earworms are present in some ears. Spider mites are starting to show in corn fields, along fields margins as our ditch banks are getting shredded.

## COTTON:

Cotton around the area ranges for 3-5 true leaves to half grown squares. Weed management efforts were made this week as fields in some areas finally dried out enough to get across them. Herbicides appear to be performing well across the area. Insect pest remain present across most of the fields in the area. Some area fields have received their first application of plant growth regulators, as the wet warm weather has led to excellent growing conditions.

Plant growth regulators can be used to slow the rate of cell expansion, which can lead to shorter internode lengths, and potentially a shorter plant at the end of the growing season. They are good at helping manage plant height, to increase harvest efficiency, and at time can influence fruit retention by allowing the plant to spend energy on filling and setting fruit instead of increasing the height of the plant. When deciding about applying a plant growth regulator, there are multiple factors that should be thought about before the application is made. The first should be plant height and internode length of the top 5 internodes. Fields that have a height to node ratio greater than 1, could potentially benefit from a PGR application, whereas fields height to node ratio less than 1 may become too stressed by a PGR application. Soil moisture, weather forecast and fertility program should also be weighed when deciding whether or not to apply a PGR. If fields are experiencing drought and/or heat stress, PGRs should not be applied as it can make the stress worse. Conditions that favor a PGR application include: thick stands, high Nitrogen rates, and conditions that favor excessive growth rates within the next week to ten days.

Fleahoppers remain and issue for area cotton fields, as more fields are starting to square and become susceptible to fleahopper injury. Fleahoppers damage causes square to fall from the plant, leaving a light brown abscission layer where the square was attached to the fruiting branch (Figure 1). As As fields start reaching the economic threshold for fleahoppers we need to watch for both bollworm eggs and aphids. Last week on some early planted cotton fields, I was finding some bollworm eggs in the terminals of plants. We do have a good population of minute pirate bugs present in area cotton fields, with some lacewing adults laying eggs in cotton as well. If spraying for fleahoppers, an insecticide that is soft on our beneficial population should be used, this way we can utilize both our beneficial insect population and our Bt toxin in the cotton to keep the bollworm damage to a minimum.



**Figure 1.** Adult cotton fleahopper. Photo credit: James Smith, Mississippi State University, Bugwood.org

## CORN:

The corn crop is developing good, most of the fields I am looking at are in the dough stage, with some fields still in the milk stage and some as far along as the dent stage (R3-R5). Earworms are present in area fields, but do not appear to be extremely bad. Corn rootworm beetle damage to silks is being observed on corn ears by lack of pollination to parts of the ears due to the beetles clipping the silks before the ovual could be pollinated. The ears with rootworm beetle damage I am seeing is a few kernels on the tips of the ears not being pollinated, at this point in the growing season there is nothing that can be done, but noting which fields have rootworm issues, and rotating away from corn for at least one year.

Spider mites are on the move as the thermometer is steadily climbing, and the plants around field edges and in our ditches are drying down or getting shredded. I have observed a few leaves along field edges with both banks grass mites and carmine mite populations, sometime with both on the same leaf. Yield loss from spider mites occurs when infestations are present between tasseling and the soft dough stage. Once the field reaches the dent stage, spider mites do not directly reduce grain yields, but fields being grown for silage can see yield loss until the crop is chopped. Spider mite populations are favored by hot, dry weather much like we saw last week. The rains received on Sunday night into Monday morning may help keep our mite populations from developing to an economic population before the crop reaches the dent stage. The economic threshold for spider mites in corn is 21-30% of the plants leaf area damaged, which corresponds to a damage rating of 3 using the scale developed by Archer et al. 1989 , which can be found in the new guide “Managing Insect and Mite Pests of Texas Corn” at the following link <http://agrilife.org/lubbock/files/2016/02/ENTO-049.pdf> . At a damage rating of 6 (51-60% of leaf area damaged) the mites have already caused significant yield loss, and miticides will not effectively manage the populations. There are several miticides/ insecticides labeled to manage spider mites, but some products are labeled for certain species while others are not.

## SORGHUM:

Sorghum growth stages vary from mid pollination to fields still in the pre-boot stages of growth in some wildcat sorghum in the area. Sorghum midge numbers are currently low, but are starting to increase in areas, and our late planted fields will be at an increased risk for needing to be sprayed at least once for sorghum midge. The economic threshold for sorghum midge is based on the cost of control, value of the grain on a hundred weight basis, and the number of flowering heads per acre. The formula to calculate the threshold is:  $\text{number sorghum midge per head} = (\text{cost of control} \times 33256) / (\text{value of grain } \$/\text{cwt} \times \text{number flowering heads per acre})$ .

Sugarcane aphids remain present around the area, but still are well below the economic threshold. Populations did slightly increase last week (June 17-21) when we were hot and dry. The rains received Sunday night and into early Monday morning may have washed so the aphids off, but the cool wet weather also does not favor rapid population growth that would be able to outgrow or beneficial population. As we move later into the year, we need to keep an eye on these so we can start managing them before it is too late.

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