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Blacklands IPM Update

GENERAL:

Some fields have finally dried down enough to plant more cotton, and producers are trying to plant as a chance of rain comes back into the forecast over the weekend. Cotton, corn and sorghum that has been planted and emerged is finally growing as our saturated soil profile is finally starting to dry down. Thrips populations increased over the last week in cotton fields in the scouting program but remain below the economic threshold of one thrips per true leaf. Sugarcane aphids were found in Hill County this week with small colonies being found on Johnsongrass on Wednesday north of Brandon, and in sorghum on Thursday near the Hillsboro Municipal Airport. Sorghum fields need to be checked for sugarcane aphids at least once a week until a population is found and then fields need to be scouted every 3 to 5 days. Wheat in the area ranges from soft dough in the soft red winter wheat fields to hard dough in the hard red winter wheat.

COTTON:

Some fields in the area have dried down enough to have some field work done including planting. Fields that have been planted and are up are finally growing now that the soil has dried down some, and fields in the scouting program was at the 2 to 3 true leaf stage last week. Thrips are present in all cotton fields in the scouting program but still well below the economic threshold. Higher thrips populations have been observed in fields that are close to wheat that is drying down. As our wheat crop continues to dry down and move closer to harvest we need to keep an eye on potentially damaging populations of thrips.

SOGHUM:

Sugarcane aphids have been found in Hill County on both johnsongrass and sorghum. On Wednesday while checking wheat north of Brandon I decided to stop and look at some johnsongrass along field edges and in the bar ditch and found small colonies of sugarcane aphids. Most colonies were less than 50, but there was one colony of 100 or more aphids on a leaf. On Thursday while scouting sorghum near the Hillsboro Municipal Airport I found an extremely low population of sugarcane aphids, with only three aphids being found across four sorghum fields. We need to keep in mind that sugarcane aphid populations can quickly increase to the economic threshold when beneficials are not in the field to help manage the population. There were beneficial insects around the aphid population found in the johnsongrass, however, I did not notice any beneficials around the aphids in the sorghum. The lack of beneficials in the sorghum could also be due to the extremely low number of aphids in these fields.

There are two economic thresholds for sugarcane aphids used in the state of Texas. The first threshold is based on growth stage and the percent of plants infected with 50 or more aphids per leaf (**Table 1**). The second threshold is based on the average number of aphids per leaf from plant emergence to flowering, and this economic threshold is 50 aphids per leaf. Depending on the threshold you use determines how to scout and record data. To better discuss the scouting procedures for each method I will call plants infested threshold the High Plains Threshold since it is commonly used in the Texas High Plains and the number of aphids per leaf threshold the Central/South Texas threshold.

Table. 1 Sugarcane aphid thresholds based on sorghum growth stage (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 with heavy honeydew
Dough	30% of plants infested with established aphid colonies and localized areas with heavy honeydew
Black layer	Heavy honeydew and established aphid colonies. Treat only to prevent harvest problems. Observe preharvest intervals for insecticides
Localize area includes a single plant or group of adjacent plants with sugarcane aphids colonies.	

When using the High Plains threshold, you want to examine 10 plants form at least four areas of the field and document the total number of plants checked and the total number of plants with 50 or more aphids. Once you have a percentage of plants with 50 or more aphids, use the threshold in Table 1 to determine if an insecticide application is warranted. When using the Central/South Texas threshold you want to examine one leaf from the lower canopy and one leaf from the upper canopy on at least 5 random plants from a minimum of four regions of the field. To use this threshold, you will need to estimate the number of sugarcane aphids (will take too long to count) per leaf. Once you have looked at a minimum of 40 leaves in the field, you will need to calculate the average number of sugarcane aphids per leaf, and if the average is 50 or more per leaf an insecticide should be applied. For fields that average close but still below the economic threshold, one should take into consideration the rate of aphid population growth, future weather conditions, and a potential backlog with ground rigs and/or crop dusters before deciding not to spray.

Through the years several insecticides have been tested for their efficacy against sugarcane aphids, and their ability to manage a resurgence of the aphid. Through these trials two insecticides have performed well and preserved the beneficial insects to help keep sugarcane aphid populations form flaring back up. These products are Sivanto and Transform. Both products are labeled, but Transform is only labeled through a Section 18 Emergency Exemption label, which has recently been approved by the EPA to include the state of Texas. Labeled rates for Sivanto is between 4 and 7 ounces per acres, with no more than 28 ounces per acre applied per year. Transform labeled rate is between 0.75 oz. per acre to 1.5 oz. per acre, with no more than 3 oz. being applied per acre in a single year. Transform also has some restrictions to help minimize negative effects on bee populations. These restrictions include no application within three days of bloom through seed set and only two applications of transform can be made to a single field within a year. All insecticide applications for sugarcane aphid management should be applied in a minimum of 10 gallons per acre by ground and 5 gallons per acre when applied by air.

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