Blacklands IPM Update

GENERAL:

Wheat harvest across the area is almost finished with yield reports still ranging from upper 40 bushels per acre to as much as the low 60 bushels per acre. Corn conditions vary across the area depending on soil type, planting date, and the amount of rain received during the last round of rain. Corn earworm activity in the area's corn crop is slowing down as larvae are starting to pupate from the older fields, but based on the timing of the start of pupation and the growth stage of our late planted corn is at risk of seeing corn earworm issues. Spider mite numbers in area corn fields have increased thanks to the recent hot dry weather, and fields should be scouted to make sure treatment is not justified to prevent yield loss from spider mite damage. Our late planted corn crop and grain sorghum are at the greatest risk for economical losses due to spider mite infestations. Cotton is the area is growing strong, and most of the fields in the area are now squaring with only a few late planted fields still susceptible to thrips damage. Fleahopper numbers have increased in the area with most of the fields in the scouting program at or above the economic threshold this week. Aphids and whiteflies are still being found in fields that were sprayed for thrips and have not been treated for fleahoppers, but their numbers remain well below the economic threshold.

COTTON:

Cotton in the area ranges from three true leaves to as late as match head squares, with insect pest numbers starting to pick up. Thrips were present and at the economic threshold in some of our later planted cotton in the areas around Bynum, Irene, an Malone. With wheat harvest almost complete any field without 5 or more leaves should be scouted for thrips. Fleahopper numbers increased over the last week with only a handful of fields in the scouting program that have not been treated. Other insect pest being found in the area include aphids and whiteflies, but thanks to our beneficial insect population or fleahopper treatment their populations are still well below their respective economic threshold. If this hot and dry weather pattern remains for longer, we could start to see some spider mite issues in our cotton crop.

Fleahopper numbers increased over last week (June 1-6), with most fields in the scouting program having between 10 and 13 fleahoppers per 100 plants, but a few fields along and east of Interstate had over 15 fleahoppers per 100 plants. Most of the fleahoppers I have observed this week (June 1-6) and the week before (May 26-30) were adults, but later in the week I started picking up more fleahoppers. Square set across the area remains good with only a handful of plants being found throughout the week with missing squares. It is hard to say whether these missing squares are due fleahopper feeding our weather conditions. The economic threshold for fleahoppers in the Texas Blacklands is 10 t0 15 fleahoppers per 100 plants. When making an insecticide selection for fleahoppers, we need to take into consideration both the beneficial population and the presence of aphids and/or whiteflies in the fields and select an insecticide that conserves our beneficial population so we do not see a flare up in secondary pest like aphids, spider mites or whiteflies.

With a hot and dry weather pattern over the area and expected to stay in the area for the foreseeable future spider mites could become an issue in area cotton fields. Spider mites feed on the plant by piercing cell of the plant, causing the leaf to develop white to yellowish specks (**Figure 1**). As feeding continues and the population grows the damage spreads and the leaves develop a reddish color before turning brown and being shed from the plant. If spider mites are left untreated, they can cause premature defoliations, leading to reduced lint yield, fiber quality and seed production. Spider mite infestations develop along field edges where spider mite infested weeds or other crops are present. Managing weeds or spider mites in other infested crops along field edges can reduce the risk of spider mites migrating into the fields. Insecticide selection for managing other insect pest can increase the chance of having issues with spider mites. When spraying for fleahoppers, aphids, or bollworms a broad spectrum insecticide like a pyrethroid should be avoided, to conserve the beneficial population in a field that is helping to keep spider mites and other insect pest below their respective economic thresholds. In cotton hat hasn't started blooming fields should be scouted to protect the leaves from damage.

Once fields are blooming and starting to set bolls, fields should be scouted to protect the leaves responsible for filling the bolls from spider mite damage, this includes the main leaf at the node of each fruiting branch and the subtending leaf on the fruiting branch. The economic threshold for spider mites in cotton has not been fully worked out for cotton in Texas, but spider mite infestations should be treated when at least 40 percent of the plants are showing noticeable leaf damage with a growing spider mite population. Spider mite infestations tend to be concentrated to certain parts of the field, and spot treatments can be made to manage their populations in a more economically feasible manner. There are four active ingredients that can be used to manage spider mites in cotton including abamectin (ABBA Ultra, Agri-Mek SC, and generics), spiromesifen (Oberon 4SC), etoxazole (Zeal 72WSP) and fenpyroximate (Portal).

Figure 1. White to yellowish stippling of cotton leaf caused by spider mite feeding. Photo Credit: Clemson University - USDA Cooperative Extension Slide Series , Bugwood.org

CORN:

The area corn crop has fared the hot dry weather over the last 7 to 10 days well, with only a few corn fields exhibiting leaf curling from stress in the early mornings. All the corn in the area could use a rain especially fields on some of our lighter soil. The forecasted calls for temperatures this week to be in the upper 90s, and Tuesday is expected to break the triple digit barrier, this could lead to temperature stress in our younger crops, poor pollination in fields that are currently pollinating, and some kernel abortion in corn that is already pollinated. The recent dry weather has slowed disease development that picked up two weeks ago because of cooler wet weather. The biggest issue in area corn fields right now is spider mites, which are being found in area all around the area but are currently worse in fields west of the interstate.

Spider mite populations have increased over the last 7 to 10 days, especially west of the interstate where spider mite colonies can be easily found at the flag leaf or higher. The forecast has this hot and dry weather pattern to continue for at least the next 10 days, giving enough time for spider mite populations to increase to levels that justify treating fields with a miticide. Most of the fields I am finding spider mites in are past pollination, but our younger corn crop is the most at risk of seeing economic yield loss from spider mite infestations. Work conducted by entomologist in the Texas Panhandle found that spider mites can cause about a 17 percent loss in silage yield and about a 23 percent loss in grain yield. Corn should be treated for spider mites before they cause stippling on the ear leaf or middle third of the canopy. Once corn reaches the dent stage spider mites do not cause economic loss, but if feeding damage is severe it can cause fields to lodge before harvest.

Our grain sorghum crop is growing nicely thanks to the recent rains with very few issues. Last week I looked at some fields in the south eastern portion of Hill County and found some aphids, but none of them were sugarcane aphids. The predominant aphid I am finding in area sorghum is the corn leaf aphids which does not negatively impact grain sorghum yield. Sugarcane aphids have been found on Johnsongrass throughout the county, and this hot dry weather is favorable for rapid reproduction of the sugarcane aphid. Fields should be scouted weekly right now until sugarcane aphids are found in the field and then scouting should be conducted every three to five days.

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