July 2, 2021 Volume 3, Issue 13

Blacklands IPM Update

Texas IPM Partners With Nature

Texas A&M AgriLife Extension

GENERAL:

Cotton fields are progressing nicely, and have a good square set especially for being in waterlogged soils for almost the entire month of May. I did start picking up blooms in some fields around Abbott and Aquilla last week (June 21-25), but these were mostly in higher elevated or well drained fields or areas of fields. Pest activity in cotton is still highly active as last week I was finding fields at or above the economic threshold, and I have also started picking up on bollworm eggs throughout the county and lygus bugs in some area fields. Corn is rounding the corner to grain harvest, and silage harvest operations are currently underway. All the corn fields I have looked at are at the dent stage and still has some kernel weight to be added, and there are a few pests we need to remain on our radar. Grasshoppers are highly abundant, and I found some significant grasshopper damage in corn driving on a county road near Abbott. Most of the sorghum in the area is starting to bloom, and we need to keep an eye out for midge as the wet weather during the month of May delayed crop development and we are now past the last bloom date that would potentially avoid midge damage. In sorghum we also need to keep a watch on head worms and sugarcane aphids.

COTTON:

Cotton in the area ranges from just starting to set square to peak bloom in some of our earliest planted cotton on the western portions of the county. The recent rains will be timely as due to the wet weather during the month of May, cotton plants did not have much need to set a deep root system to scavenge moisture from the soil profile, and some fields in peak bloom were starting to show the early symptoms of Potassium deficiency. Insect pest activity remains high across area cotton fields, with fleahoppers still a threat to cotton that has not started to bloom, bollworm eggs being found in area cotton fields, and some fields with very low populations of lygus bugs.

Fleahoppers remain an issue for area cotton fields, especially those that have not started blooming. The overall number of fleahoppers are lower than what they were two even three weeks ago, but I still am finding fields with treatable populations of cotton fleahoppers around Hill County. For fields that still have a way to go to reach the early bloom stage, it is highly recommended to continue scouting for cotton fleahopper as they can reduce the crops yield potential rather quickly if left untreated. In fields that have reached the early bloom stage it is highly likely that those fields are not longer at risk of economic loss from cotton fleahopper. Over the course of the last three weeks I have used Acephate at 4 oz/acre plus 2 oz/acre imidacloprid, Centric at 2 oz/acre, and Bidrin at 4 oz/acre plus 2 oz/acre for fleahopper control, and have seen good results out of all three prescriptions. They are holding fleahopper back for 7 to 10 days after applications, with Centric providing the longest residual activity against fleahoppers.

Grasshoppers are causing defoliation in some are corn fields, and as we get closer and closer to corn harvest, we could see them moving into nearby cotton fields. Much like in corn, grasshoppers are an occasional pest of cotton and rarely reach level or cause enough damage that would justify spraying an insecticide. Over the last 7-10 day I have picked up on some grasshopper damage and grasshoppers in cotton fields, but their number and amount of damage cause has not been a cause of alarm for me. Treatment for grasshoppers in cotton is not justified until they have caused a lot of defoliation (30% or more), which typically occurs along field margins first. If field margins are being defoliated by grasshoppers, they can commonly be managed by spraying fields edges especially those that border where the grasshoppers are coming from. Grasshopper damage in cotton is usually worse in fields that are bordered by native range lands, pastures, and even hay fields and these fields and field edges should be scouted first. Insecticide such as Bidrin, Prevathon and multiple types of pyrethroids are labeled for grasshopper management in cotton. However, if you do have to treat for grasshopper the best insecticide to apply is Prevathon which provide good control and does not kill all the beneficial insect in the field that are helping keep secondary pest like aphids and spider mites below the economic threshold.

The full moon last week (June 21-25) has led to some bollworm eggs being laid in area cotton fields, but egg number remain quite low. As we move further into the growing season, we need to keep a close watch on bollworm eggs and bollworm number in area cotton fields so we can treat prior to them getting too big to control or moving into bolls or deep into the canopy where it will be hard to get good coverage with an insecticide application. In cotton with the Bollgard 2 and TwinLink Bt technologies, we need to keep a very close eye out for bollworm issues as I am already hearing reports of bollworms making it through these technologies in the gulf coast region of Texas. I suspect we will see another flight here in about 7 to 10 days that will be a big one, as most of the earworms in corn just cut out of the ear to pupate into adults. In Texas we have two economic thresholds for bollworms, one is based on egg lay and the other is based on the amount of damage fruit and the presence of live worms. The egg threshold was developed for use in out two gene cotton (Bollgard 2 and TwinLink) in areas where Bt resistance has been a major issue and is 20% egg lay or 20 percent of the plants inspected with at least one egg. This region of Texas has not seen many Bt resistance issues in cotton in a while, and it is not likely that our dual gene cotton will benefit from an insecticide being sprayed based on egg lay. The threshold for bollworms I recommend for this area of Texas is 6% damage fruit (squares and bolls) with live worms present. There are several insecticides labeled for bollworm control in cotton, but it is highly advised to avoid using pyrethroid based insecticides as there is data show our bollworm populations have a good level of resistance to pyrethroids, and it will likely cause aphids and even spider mite number to increase rapidly. Prevathon is still the best insecticide choice for bollworms, and the company selling the product is eventually switching from Prevathon to a new product called Vantacor which is just a higher concentration of Prevathon with lower uses rates between 0.7-2.5 fl oz/acre versus the use rates of 8-29 fl oz/acre for Prevathon.

Lygus bugs have also been found in a few cotton fields around Aquilla and Hillsboro, and this insect over the last couple of years as not been an issue but still warrants a close eye as they can damage both squares and small bolls. In the Blacklands of Texas we mostly see the tarnished plant bug (**Figure 1**), which can vary in color from pale yellow with some black markings to reddish brown and even black with some yellow markings. The nymph (immature) lygus bug is a yellowish green, and as they mature will develop 5 black dots on their back. There are two ways to scout for Lygus in cotton which include a sweep net or a drop cloth/beat sheet. The sweep net works best for cotton that has not reached peak bloom yest and the drop cloth works best as plants get taller and starting to bloom. The economic threshold for Lygus in cotton is dependent on the growth stage and sampling method, and ranges from 2-3 per 6 row feet using a drop cloth to as many as 15 per 100 sweeps using a sweep net. There are several insecticides labeled for controlling Lygus, or plant bugs in cotton and include Transform, Intruder, acephate, Centric, Bidrin, along with others.

Figure 1. Adult tarnished plant bug, which is often referred to as a Lygus Bug.
Photo credit: Ronald Smith, Auburn University, Bugwood.org

CORN:

The area corn crop has progressed nicely this year despite being dry early on, then getting extremely wet and then soils eventually drying out after a wet May. It was not until last week (June 21-25) that I started picking up on some fields showing signs of heat and/or moisture stress. The rains over this past weekend and earlier this week, and those in the forecast for this weekend have and will be very beneficial for corn yields, especially bushel weight. Since most of the area corn crop is at the dent stage, it is out of the window for yield loss from diseases that can be managed. Grasshopper numbers are increasing in the area and has defoliated some plants in a field of corn around Abbott (**Figure 2**). Grasshoppers are an occasional pest of corn, and rarely cause economic damage. Their damage can typically be found along field margins first and seeing them on field edges with extensive defoliation can justify an insecticide application. It is recommended to treat corn when there are 10 or more grasshopper per 9 square feet (1 square yard). There are several insecticides labeled for grasshopper control in corn, but if you do elect to spray for them you need to pay attention to the insecticide's pre-harvest interval, as some of these products carry PHIs of 30 days. Being this late in the season it is hard to say how much yield could be lost if grasshoppers are not treated, as this would depend on several factors like growth stage or how long until the crop reaches black layer, grasshopper populations and the amount of defoliation caused by grasshoppers. Ideally, you want to treat before too much of the ear leaf and leaves above the ear are defoliated as these are the leaves most responsible for filling the kernels on the ear.

Figure 2. Defoliated corn on field margin caused by a grasshopper infestation.

Blacklands IPM Update is a publication of Texas A&M AgriLife Extension IPM Program in Hill & McLennan Counties.

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