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FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
1102 E. FM 1294, Lubbock, Texas 79403

Cotton Insects

Thrips

Thrips have picked up considerably in some areas over the past week, but declined in others. In the Sunray area, much of the cotton is just now starting to take off growing and thrips are just beginning to colonize. In our samples we were picking up about 1 thrips every 10 plants. However, as the wheat begins to dry down more over the next week, I expect these numbers to increase substantially. Similarly, thrips populations have been low in the Lubbock area and south to Seminole. This is not unusual since the primary source of thrips, wheat, is not abundant in this area. Last week we picked up thrips numbers approaching threshold in the Morton area, but in the areas that received rainfall, these numbers declined considerably.

Near Dimmitt and Halfway, fairly high thrips populations have been developing, numbering around 3 thrips per plant on cotyledon cotton. The threshold at this stage is 1 thrips per plant. Fields experiencing this type of pressure should be treated with a foliar insecticide as soon as possible to prevent damage and potential yield loss.

Remember that temperature will affect the cotton plants ability to tolerate thrips damage. When temperatures are running around a high of 80 degrees and lows in the mid-50s, it maybe beneficial to treat for thrips when they average 0.5 thrips per plant at the cotyledon to 1 true leaf stage. This is below the current recommend action threshold. However, when temperatures are hot (highs in the low 90s and lows in the low 70s) as many as 2 thrips per true leaf can be tolerated. This is above the current action threshold.

Pay close attention to the extended forecast when making thrips management decisions. Overall, it looks like area temperatures should be increasing over the next week (click here to view the 7-day forecast, link to forecast tempertature slide). Sunray, Dimmitt, Muleshoe and Littlefield are expected to see temperatures of lows in the mid-upper 50s and highs in the upper 80s. Under these conditions, I would recommend that the standard threshold of 1 thrips per true leaf be utilized. Although, if approaching threshold and you have an application of Roundup going out, I would strongly consider including an insecticide for thrips with the application. In the Lubbock area and south, temperatures are expect to be in the lower 60s to upper 80s and low 90s. Under these conditions, more thrips can likely be tolerated. We do not have a good handle on just how many thrips it will take to cause yield loss under these conditions, but early data suggest that 2 thrips per true leaf may be a good threshold.

When scouting for thrips, examine the undersides of the leaves closely. On small cotton the leaf will often be covered with debris, making it difficult to spot the thrips. Usually they will begin to move about after several seconds, so take your time. Most importantly, use a sharp pencil or knife to pry apart the newly forming true leaves. Thrips, particularly the immature ones, love to hide in these furled leaves.

Thrips are often hard to spot on leaves covered with debris

Be sure to unfold and examine the newly formed leaves, thrips like to hide in these types of areas

Leafminers

Liriomyza leafminer adult (left) and mine left by larvae (right)

Although not considered an economically damaging pest of U.S. cotton, it is not uncommon to see leafminers in early-season cotton on the Texas High Plains. In most areas I have not seen high incidence of leaf mining in cotton, but south of Morton I noted a field where over 90% of the plants had mines on the cotyledons. In tests conducted last year, we found that plants infested with leafminer tended to be vegetatively stunted relative to uninfested plants. However, we were not able to detect a reduction in yield due to this mining. It is evident that this is an area that needs to be researched. At this time we do not recommend treating cotton for leafminers.

The leafminer we are seeing is a *Liriomyza* sp. and is a common and damaging pest of vegetable crops. The adult insect is a small black and yellow fly, about the size of a gnat. The adult fly lays her eggs in the leaf tissue where the larvae mine and develop, leaving behind an opaque serpentine line.

Cotton Pests Around the State

Upper Coastal Bend (reported by Clyde Crumley, IPM Agent, Matagorda, Wharton, and Jackson counties)

Weather conditions have switched from warm and dry to slightly wetter. The majority of the cotton in is in the 1/3 grown square stage. Square set has been running mostly around 85%. Cotton fleahoppers are continuing to infest area cotton, but Lygus and *Creontiades* numbers have been very low. Some fields have aphids, but thus far they remain below threshold.

Southern Blacklands (reported by Marty Jungman, IPM Agent, Hill and McLennan counties)

Area rainfall on 5/26 ranged from 0.1-1.1 inch. The majority of the cotton is beyond thrips concern. Aphids are ranging from light to moderate, and fleahoppers are ranging from 0-24 per 100 terminals.

Southern Rolling Plains (reported by Richard Minzenmayer, IPM Agent, Runnels and Tom Green counties)

Badly needed thunderstorms dropped 0.5-3.5 inches of rain in areas, although Runnels County is still very dry. Irrigated cotton is beginning to emerge.

Cotton Agronomy

Overview of the week

Producers have been busily planting cotton fields across the region. We have made significant planting progress during the last week, and the arithmetic average for all counties reported by Extension agents or the time period of May 16-22 puts us at about 60% planted, which likely represents most of the irrigated crop. The average last week was about 34%. The unplanted fields are mostly dryland which badly need some rainfall. Some spotty showers crept into the region over the Memorial Day weekend and provided some relief in some areas, but a good region wide rainfall event is necessary for establishment of the dryland crop. Center pivots are still being cranked up behind planters, and subsurface drip irrigated fields are also being watered. In spite of the cooler weather, many irrigated fields are requiring additional moisture behind the planters and it is a real struggle for many SDI producers to obtain uniform stands. Showers occurred in some areas across the region this week. Associated with the storm activity, a major hail event pummeled the Idalou, Lorenzo, and Ralls areas this week. The good news is that some rainfall was associated with that which is good for the dryland, but many irrigated fields which were just emerged were destroyed or badly damaged. The extent of this hail event is poorly understood at this time as most dryland fields were not yet planted or were "dusted in" and not emerged. With insurance deadlines looming in the not so distant future for several counties, many dryland producers will have to make good progress by dry planting these fields soon.

Temperatures were somewhat above below during the past week and the heat unit accumulation reflected that (click here for May temperatures). These cooler conditions have resulted in poor growth in many fields, and I observed several fields with poor emergence and seedling disease in the northwest counties this week. Stronger seedlings generally look

fine, but the straggling ones are exhibiting seedling disease symptoms.

Making Replant Decisions

Thunderstorms have wreaked havoc in some areas. Because of this it is important to inspect fields to determine the amount of damage incurred. Replanting decisions vary from producer to producer and many times county to county. Many times, it is important to get a handle on the root health of the plants, stem bruising, etc. A while back, we developed a new departmental publication concerning the difficult replant decision making process. For a copy of Making Replant Decisions in Cotton -2007 .

Seed companies have replant programs providing seed replacement. For good information on this, go to the Plains Cotton Growers Web site or call your local seed company representative. RKB

Grain Sorghum Agronomy

Changes in Milo-Pro (Propazine) Label

Albaugh, Inc. has made a few changes in the label for propazine (Milo-Pro) for use in sorghum vs. the 2008 label. Producers using this product in lieu of atrazine may not be aware of them. In addition, one key difference of propazine vs. atrazine is that propazine is not labeled for postemerge use.

Key points, 2008 Milo-Pro label:

- loamy sand, sand, not labeled
- sandy loam, loam, 0.75-1.20 quarts/A (do not incorporate on sandy loams)
- silt loam, clay loam, 0.75-1.20 quarts/A

Key points, 2009 Milo-Pro label:

- loamy sand, sand, not labeled
- sandy loam, 0.50-0.75 (do not incorporate on sandy loams)
- loam, silt loam, clay loam, 0.75-1.20 quarts/A

The difference is that the rate was labeled quite high for a sandy loam soil in 2008. In contrast, atrazine is not labeled for use on sandy loams. The recommended spray pressure remains at 30-40 psi with screens at 50 mesh or coarser. I did not hear of any application problems with this herbicide in 2008 like the flowability and plugging that occurred in Milo-Pro's first year back on the market in 2007.

Some Yellow Grain Sorghum Reported

A couple of sorghum fields in the region have been reported to be yellow in color. Most often this is iron deficiency, where on the youngest leaves there is in moderate yellowing between the veins, but the veins remain green. Strong iron deficiency is enough to bleach the green color out of the leaves.

For the current 2009 season, it appears that the onset of yellow leaves is more related to cloudy, cool conditions, possibly combined with heavier irrigation. The fields I have seen to date in 2009 that were yellow do not appear to have any significant caliche (which means extra high soil pH, hence iron deficiency). As sorghum fields return to warmer sunny weather and fields dry out (if applicable), and as root volume expands, I expect the sorghum will grow out of this temporary yellow condition.

For more information on this topic, particularly in relation to caliche soils, consult the August 1, 2008 edition of FOCUS.

Hybrid Pearl Millet (HPM) as Summer Annual Forage

Several producers have inquired this spring about hybrid pearl millet as a possible summer annual forage, often in lieu of sorghum/sudan, or haygrazer. Reasons cited for interest in HPM include high leafiness relative to sorghum/sudan, drought tolerance, the suitability of feeding HPM to horses (which any sorghum family forage should not be), and as a forage substitute due to the presence of nearby sorghum seedblocks.

This leafy forage is similar to conventional sorghum/sudans, but with some key differences. Seed size is much smaller (75,000-90,000 seed/lb.) than sorghum/sudan thus seeding rates must decrease. Due to small seed size, a shallow seeding depth of 0.75 to at about 1.25" is recommended, which often limits establishment under dry conditions. Relative to sorghum/sudans (60-65 F) warm soils are critical for success for hybrid pearl millet (65-70 F). Yields usually are somewhat lower than sorghum/sudans but this leafy forage tends to have higher quality (more than 50% leaf). Producer experience in the region suggests, however, that under droughty conditions HPM may in fact be more productive.

In West Texas hybrid pearl millet is much more tolerant than sorghum/sudan of iron (Fe) deficiency induced by chalky or caliche soils. Thus millets may produce comparable or even higher yields on these soil types relative to conventional sorghum/sudans. Hybrid pearl millet is drought tolerant, can be fed to horses, and does not develop prussic acid problems (a good forage choice for fall grazing when light frosts are possible; cattle can be moved off of sorghum/sudan to HPM with no feeding safety issues)). This material may be grazed sooner (18-24") than sorghum/sudan. It should be harvested in boot stage for maximum total digestible nutrients per acre, or in pre-boot if higher quality is desired. Regrowth potential is somewhat less than sorghum/sudan so if haying you may consider leaving about 2" more of stubble or if grazing do not allow livestock to trample the stalks.

Suggested seeding rate targets include:

- Dryland—narrow rows, 8-10 lbs./A; rows >20", 5-6 lbs./A
- Irrigated—narrow rows, 12-15 lbs./A; rows >20", 6-8 lbs./A

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Editors

David Kerns and Patrick Porter, Co-editors

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Contributing Authors

Randy Boman, Extension Agronomist
David Kerns, Extension Entomologist
Calvin Trostle, Extension Agronomist

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Irrigation at Lubbock

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