
FOCUS on South Plains Agriculture

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Section 24(c) for Oberon miticide on sorghum grown for planting seed ONLY

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FOCUS will not be published next Friday, July 27. We will resume regular weekly publication on Friday, August 3, or sooner if necessary. DLK/RPP

Cotton Insects

Cotton Fleahoppers

Depending on your location and what kind of weather events you have experienced, your cotton may or may not be blooming. But just because you may be at bloom doesn't necessarily mean that you need not worry about fleahoppers. Fleahoppers can still be a concern even 2-3 weeks after flowers are found, especially in the high yielding situations. We are finding more fleahopper nymphs than previous weeks, indicating their successful establishment and reproduction. Remember that the threshold is about 25 to 30 fleahoppers per 100 plants checked, but is dependent on square set. If your square set is dropping, you should be wary of cotton fleahoppers. Although you can pick up adults in a sweep net, you won't find the nymphs. To pick up the nymphs you really need to be using a dark beat sheet or bucket (these are the most accurate methods), or use a visual inspection. When using a visual inspection, you will pick up most of the nymphs in and around the terminal tissue at the top of the plant, and also in the new growth on the branches. ([click here to view cotton fleahopper life stages](#)).



Lygus

Lygus are still of concern, but we've seen a bit of a drop in adult activity since last week's round of spraying. To me it appeared that the adults we saw in large numbers were primarily concentrated on the southern and western sides of cotton fields adjacent to weedy areas. However, I do know of a few fields that were more uniformly infested. We did observe some square loss associated with these populations, but within a few days they had spread out and many may have left the field. These adults were on the move, and although feeding in the cotton, they were primarily concerned with dispersing and possibly egg laying. However, thus far we have not observed very many *Lygus* nymphs in cotton, but it could be several more days before these eggs (if there) hatch.

Sampling for *Lygus* and determining when to treat.

Last week I discussed sampling *Lygus* and treatment thresholds. As stated then, many consultants prefer to use a sweep net for sampling *Lygus*, but in retrospect to what I stated last week, to standardize the technique, it is probably best to sweep single rows, not two at a time. Keep in mind that picking up small nymphs with a sweep net is not so easy, so we may want to use a different technique for sampling those, at least for now, although the sweep net works fine for adults and large nymphs.

Always use a standard cloth or canvas sweep net with a diameter of 15 inches. One sample set should consist of 50 sweeps across a single row of cotton. However, if you are picking up too much plant material in 50 sweeps, you may want to reduce the number to 25.

1. Walk briskly down the row and swing the net in front of you perpendicular to the row.
 - a. Strike the plants so that the lower edge of the rim strikes the plants about 10 inches from the top.
 - b. Keep the lower edge tilted slightly ahead of the upper edge.

- c. Keep the sweeps far enough apart that you do not sweep plants that have already been jostled by the net.
 - d. Sweeps that are too closely spaced may cause *Lygus* to fly or drop from the plants and thus be missed.
 - e. Keep the net moving to prevent adults from flying out.
2. After each set of sweeps, count all the *Lygus* bugs in the net, including nymphs.
3. Go through the sample slowly, looking at each leaf and watching closely for adults flying from the net.
4. Be sure not to confuse *Lygus* with scentless plantbugs, (see the July 14 edition of FOCUS).

I have looked into sweep net thresholds in more detail, and although TCE currently does not have a sweep net threshold for the High Plains, I think we can make some fairly sound recommendations based on work in other states.

In California, they are recommending the growers to consider treating if square retention is lower than expected and if on average there are:

- ∞ Early squaring: 2 to 4 *Lygus* per 50 sweeps.
- ∞ Midsquaring (bloom): 7 to 10 *Lygus* per 50 sweeps.
- ∞ Late squaring (boll filling): more than 10 *Lygus* per 50 sweeps.

If retention is higher than expected, you may be able to wait and monitor again later in the week before making a treatment decision.

For sampling small nymphs, you may want to rely of visual inspection much in the manner you do for cotton fleahopper. A 3rd instar *Lygus hesperus* is about the same size as an adult cotton fleahopper. Smaller *Lygus* may be difficult to distinguish in the field from fleahopper nymphs and similar species. Although some *Lygus heperus* nymphs typically have darkened, somewhat reddish eyes, this trait is not always consistent. *Lygus* nymphs will also have the tip of their antennae darkened, and will have a dark spot on their abdomen. Fourth and fifth instar nymphs will also have prominent spots on their

thorax as well. ([click here to view pictures of the life stages of *Lygus hesperus*](#) and [here to view cotton fleahopper life stages](#)).

***Lygus* control**

Most of what we are seeing going out for *Lygus* control is Ammo and Carbine. Both of these products have been providing good results, although Ammo may very well flare the aphid populations and should be used with some degree of caution. (See last week's edition of FOCUS for commentary on Carbine for *Lygus* control). We have reports that 4 oz of Orthene appears to be providing 1 to 2 days of *Lygus* suppression, and that a 10 oz rate appears to be offering good control, although residual control is not certain. In a test with transitory adult *Lygus*, we observed significant control relative to a check after 3 days with Carbine, Vydate, Orthene, Endosulfan, Ammo and Discipline, but it is too early to determine the true efficacy and residual activity of these products in this test. Hopefully we will have more to report in the next edition.

Cotton aphids

Aphids are widespread and can be found in just about every field. Populations have been spotty within most fields, but some areas have high populations. Cotton aphids should be treated when populations reach or exceed an average of 50 per leaf. We have seen some populations around 500 to 600 per leaf and thus a number of fields have required treatment.

There are a number of effective products available for aphid control in cotton (see the TCE publication E-6A, Suggested Insecticides for Managing Cotton Insects in the High Plains, Rolling Plains and Trans Pecos Areas of Texas 2007, for more detail). DLK

Most of what we have been seeing going out for aphid control thus far is Intruder, and control has been good. Where Carbine has been used for *Lygus* control, we are seeing few aphids behind

these applications; Carbine is noted in other regions of the cotton belt as an effective aphid material. Beneficial insect numbers have been good behind Carbine applications as well. As noted in last week's edition of FOCUS, Carbine is not a fast acting insecticide, so do not expect to see aphid numbers decline following Carbine for 3 to 4, or possibly more days depending on the temperature and humidity. High temperatures and low humidity should result in faster activity.



cotton aphids

Cotton Pests Around the State

Rio Grande Valley (reported by Manda Cattaneo, IPM Agent, Cameron, Hidalgo, and Willacy counties)

Bollworm/budworms continue to be a major concern across the Lower Rio Grande Valley with populations ranging from 0 to 7.5 larvae per 100 plants. Whiteflies can be found in a majority of fields, but the highest populations are in the western half of the valley.

Southern Blacklands (reported by Dale Mott, IPM Agent, Milam and Williamson counties)

Aphids are relatively still light and bollworm/budworm eggs have been ranging 0 to

18 per 100 terminals. Stinkbug numbers have been picking up, and boll injury has ranged from 0 to 34 per 100 plants checked.

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

Cotton continues to grow off rapidly. The drier conditions have helped the older cotton set bolls. The younger cotton is squaring and close to first bloom. Cotton bollworm is the insect of most concern. Most fields of nonBt will be sprayed for this pest along with a significant amount of BollGard I. Bollworm larvae in nonBt cotton will range from 430 percent. Bollworm larvae in BollGard I cotton will range from 220 percent 4 to 16% is not uncommon. Bollworms are of no concern in BollGard II cotton numbers are very low to nonexistent.

Northern Blacklands (reported by Glen Moore, IPM Agent, Ellis and Navarro counties)

Bollworm activity has increased over the past week. Egg numbers have ranged from 6 to 23 per 100 plants. Larval numbers are highly variable, but range from 1 to 12 per 100 plants in non-Bt cotton. Aphids are light and fleahoppers are still of concern in early squaring cotton.

Rolling Plains (reported by Ed Bynum, IPM Agent, Jones, Mitchell, Nolan, and Scurry counties)

Fleahopper are still being found and are ranging from 5 to 43 per 100 terminals. Cotton aphids are showing up in spots across many fields and are prevalent in Jones County. Bollworm moth activity appears to be on the increase.

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

Bollworms egg counts are ranging from 16 to 158 per 100 terminals and fleahoppers are ranging from 12 to 33 per 100 terminals. Aphids are showing up in spots but are not yet high.

St. Lawrence Valley (reported by Warren Multer, IPM Agent, Glasscock, Reagan, and Upton Counties)

Numbers ranged from 0-55 per 100 terminals and squares ranged from 78-100%. The higher number of fleahoppers can be found in the fields that are nearing bloom and they can tolerate more. Bollworm eggs are ranging from 0 to 3000 per acre or 0 to 6 per plant. So far bollworm activity has been light but may increase with time.

Cotton Disease

Fusarium evident in area cotton

Fusarium wilt, caused by the soilborne fungus *Fusarium vasinfectum* f. sp. *vasinfectum*, is an emerging disease in parts of the High Plains. Infested fields are typically restricted to the sandier soils found south and west of Lubbock. Alone the pathogen causes little if any damage; however, the fungus acts opportunistically, infecting root systems that have been damaged by the root-knot nematode. This interaction may result in a significant increase in losses when compared to those incurred by the nematode alone. Although caused by a soilborne fungus, the initial symptoms appear on the foliage and above-ground portions of the plant. Infected plants will begin to wilt, especially during warmer weather, and exhibit yellowing or browning of lower leaf margins. These symptoms generally occur early in the season typically 30 to 45 days after planting. Premature defoliation and even plant death may occur in the case of severe infections.

A general field diagnostic test for wilt diseases is to examine the vascular system. Healthy plants will have a white vascular system,

whereas, diseased tissues will be discolored. For Fusarium wilt, the discoloration may look continuous when cut longitudinally; however, this symptom may be confused with Verticillium wilt. Therefore, proper disease diagnosis is required to confirm which pathogen you are dealing with.

There are no labeled fungicides for control of Fusarium wilt; however, losses can be minimized through management of the root-knot nematode. Sanitation or the cleaning of soil off of field implements will minimize the spread of soil out of infested areas into areas free of the pathogen, thus slowing disease development. In addition, seeds from diseased plants may harbor the fungus; thus aiding in spread of the disease. Evaluations of seed treatments and variety performance are currently being made, and should be available by the next issue. If you have any questions regarding Fusarium wilt or any other cotton disease contact Jason Woodward at the Lubbock Center 806-746-6101.

Grasshopper Alert

Clyde Crumley, Extension IPM Agent in Gaines County, and Scott Russell, Extension IPM Agent in Terry and Yoakum counties, are reporting large numbers of newly hatched grasshoppers at the edges of some fields. In some cases there are 50 to 100 of these small nymphs per square foot. Some perimeter insecticide applications have already been made. Grasshoppers move into fields from bordering wheat and rye stubble or CRP and damage outer rows first. They become relatively difficult to kill when they are larger and older, so many people prefer to target the younger and smaller life stages while they are concentrated at field margins. RPP

Sorghum Miticide Section 24(c)

Ed Gage at the Texas Dept. of Agriculture in Austin just released notification of a Section 24(c) Special Local Need (SLN) registration for the active ingredient – Spiromesifen (Oberon 4SC), EPA Reg. No. 264-850 for mite control on grain sorghum grown for planting seed only.

OBERON CAN'T BE USED ON SORGHUM GROWN FOR GRAIN.

Oberon is very effective miticide and can now be used in Texas for Banks grass mite and twospotted spider mite control on grain sorghum grown for planting seed. We do not have any data on Oberon's effectiveness when used on sorghum, but our data from corn suggest that it should work well. Approved application methods are ground, air, or by overhead chemigation. A copy of the [24\(c\) supplemental label](#) is attached. There are significant restrictions regarding handling and use of seed sorghum that has been treated with Oberon. RPP

Pesticide News

AMVAC Chemical Corporation has recently labeled Bidrin XP

Bidrin XP ([click here for label](#)) is a combination of Bidrin (dicotophos) and Discipline (bifenthrin). Bidrin XP labeled on cotton to control a variety of pests. DLK

FOCUS on South Plains Agriculture

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