



Texas Cooperative Extension



# SOUTHERN BLACKLANDS Pest Management News

Williamson and Milam Counties

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## General Situation

More rain fell over the past week bringing upwards to 10 inches of rain and most areas received 6 to 8 inches during this time period. Some isolated areas received light to moderate hail damage early this week with the storms, with un-harvested wheat and cotton taking the most damage. Temperatures until now have been relatively mild with highs generally 90° F or less. Most of the corn is between pollination and blister stage. Much of the grain sorghum ranges from boot to bloom. Cotton ranges from pinhead to 1/2 grown square. Of course, wheat harvest has been hampered by the rains and producers have slowly been getting a little wheat harvested as the weather permits.

## Grain Sorghum

**Sorghum midge** levels have been light over the past two weeks. I expect numbers to remain below economic thresholds until the week of June 18 or later.

**Rice stinkbugs (RSBs)** levels vary from field to field and even in fields. We are finding areas in fields where RSBs are averaging 1 or more per head at the milk stage, however, these numbers have not been consistent across entire fields. We are seeing a few green stinkbugs and leaf-footed bugs in the heads of milk stage sorghum. Headworms have not been picked up yet, but expect them to start showing up sometime over the next one to two weeks.

The following information on economic thresholds for RSB, sorghum midge and headworms comes from Dr Roy Parker in the Insect and Weeds in Focus Newsletter (VOL. XXXII NO. 4) that was published on May 17, 2007.

## Sorghum Insect Treatment Threshold Tables

You may be aware that I have had concern with the **rice stink bug** treatment thresholds shown in our sorghum guide, and in fact, have suggested lower thresholds for treatment for a number of years. Another factor that affects insect pest treatment thresholds is value of the commodity; that is, the higher the value of the crop the lower the treatment threshold for pests. Two of our entomologists reviewed the original research and found that the suggested treatment thresholds needed to be changed along with listing higher commodity prices. A knowledge of the number of sorghum heads per acre will be required to use the **rice stink bug, corn earworm (headworm), and sorghum midge** tables. Note that the treatment thresholds are much lower than in the past due to generally lower cost of key insecticides, higher commodity prices, and corrections to the tables (especially rice stink bug). **Be especially careful in using the corn earworm tables since they are divided into 2 tables for larvae 0.25-0.50 inch long (3-4th instar) and larger than 0.50 inch long.**

It has been observed that a high number of small larvae do not live; therefore, the small larvae table assumes 81% mortality. This level was observed by researchers in many experiments and is likely to occur. Once larvae reach the larger size, their damage potential is much greater. I am surprised by the low numbers listed for which treatment may be justified. Be advised that this is for the corn earworm; the fall armyworm probably does not feed as much on grain kernels since it also will feed more on leaf tissue compared with corn earworm.

Table 1. Economic injury level for rice stink bug as number of bugs per acre at the milk stage.

| Control cost<br>\$/acre | Grain value (\$/cwt) |        |        |        |
|-------------------------|----------------------|--------|--------|--------|
|                         | 6.00                 | 7.00   | 8.00   | 10.00  |
| 6                       | 30,500               | 27,000 | 23,000 | 18,500 |
| 8                       | 40,500               | 35,000 | 30,500 | 24,500 |
| 10                      | 51,000               | 43,500 | 38,000 | 30,500 |
| 12                      | 62,000               | 52,500 | 46,000 | 36,500 |

Table 2. Estimated economic injury levels for sorghum midge for a range of factors.

| Control cost, \$/acre | Crop value, \$/100 lbs | Economic injury level—<br>mean number of<br>midges/flowering head |                                  |                                  |
|-----------------------|------------------------|---|----------------------------------|----------------------------------|
|                       |                        | Flowering heads =<br>18,000/acre                                  | Flowering heads =<br>45,000/acre | Flowering heads =<br>67,500/acre |
| 5                     | 6                      | 1.6   | 0.6                              | 0.4                              |
| 5                     | 7                      | 1.3   | 0.5                              | 0.34                             |
| 5                     | 8                      | 1.2   | 0.5                              | 0.3                              |
| 6                     | 6                      | 1.9   | 0.8                              | 0.5                              |
| 6                     | 7                      | 1.6   | 0.7                              | 0.4                              |
| 6                     | 8                      | 1.4   | 0.6                              | 0.35                             |
| 7                     | 6                      | 2.2   | 0.85                             | 0.6                              |
| 7                     | 7                      | 1.9   | 0.75                             | 0.5                              |
| 7                     | 8                      | 1.6   | 0.65                             | 0.45                             |

Table 3. Economic injury level for **medium-size** (¼ to ½ inch) corn earworm larvae shown as the number of larvae per acre. When the number of larvae per acre exceeds the number in the table at a given cost of control and value of grain per cwt, the value of the protected grain exceeds the cost of control.<sup>1</sup>

| Control cost<br>\$/acre | Grain value \$/100 lbs |        |        |        |
|-------------------------|------------------------|--------|--------|--------|
|                         | 6.00                   | 7.00   | 8.00   | 10.00  |
| 6                       | 51,500                 | 44,750 | 38,250 | 31,250 |
| 8                       | 68,500                 | 58,000 | 51,500 | 41,750 |
| 10                      | 87,750                 | 73,750 | 64,500 | 51,500 |
| 12                      | 102,750                | 88,250 | 77,750 | 62,000 |

<sup>1</sup> This table assumes 81 % of the medium-size larvae will die in that stage and not contribute to additional yield loss.

Table 4. Economic injury level for **large** (longer than ½ inch) corn earworm larvae shown as the number of larvae per acre. When the number of larvae per acre exceeds the number in the table at a given cost of control and value of grain per cwt, the value of the protected grain exceeds the cost of control.<sup>1</sup>

| Control cost<br>\$/acre | Grain value \$/100 lbs |        |        |        |
|-------------------------|------------------------|--------|--------|--------|
|                         | 6.00                   | 7.00   | 8.00   | 10.00  |
| 6                       | 9,750                  | 8,500  | 7,250  | 5,750  |
| 8                       | 13,000                 | 11,000 | 9,750  | 7,750  |
| 10                      | 16,250                 | 14,000 | 12,250 | 9,750  |
| 12                      | 19,500                 | 16,750 | 14,750 | 11,750 |

<sup>1</sup> This threshold table assumes all larvae will survive and complete development.

## Cotton Management

The cotton has turned a pale green color much like the sorghum crop did following the heavier rains and saturated soil conditions in late April and early May. As the soil begins to dry, the cotton should regain the healthy green color as the photosynthesis process begins to function normally.

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Square set has been decreasing and some of this can definitely be attributed to **cotton fleahopper** feeding injury on the small squares, but also, the cloudy weather and water-saturated soils are causing some fruit loss as well. We are seeing some fields that have had multiple, timely fleahopper treatments have less than desirable square sets at this point of the season. Square sets are ranging from 64 to 88 percent. Cotton fleahopper levels are ranging from 8 to 62 percent in squaring cotton. Fleahopper levels are expected to continue to migrate into cotton fields in heavy numbers for the next two to three weeks. As the cotton is reaching 10 to 12 nodes, it is time that we start setting a good percentage of squares. Hopefully the weather will clear up and we will be able to make timely fleahopper applications as needed.

**During the first three weeks of squaring, 10 fleahoppers per 100 terminals may cause economic damage. Be sure and carefully monitor fields for adult and nymph fleahoppers.**

Some recommended insecticides and/or active ingredients to manage fleahoppers include Bidrin at 1gal/40 ac, Centric at 2 oz/ac, Dimethoate 4E at 1 gal, Intruder 0.6 oz./ac, 1/16 Othene (90S) at 4 oz/ac, Imidacloprid 1.0 to 1.8 oz/ac, and Vydate CLV at 8 oz/ac.

**Aphid** levels are increasing slightly over the past week. Their levels will probably increase before decreasing as a result of fleahopper applications and possibly some early boll weevil eradication applications. As a side note, Dr. Roy Parker discussed less than desirable aphid control that has been observed in at least a few fields of cotton this year between the Lower Rio Grande Valley and the Coastal Bend of Texas to some of the neo-nicotinoid insecticides (such as Intruder, Centric, Carbine, Trimax). Aphid resistance to these types of products have not been documented yet, but we need to monitor this situation very carefully and hopefully we can complete the boll weevil eradication before something like this develops.

**Spider mites** where present have dropped to very light levels over the last couple of weeks.

Levels of beneficials vary from field to field with some fields having good levels of minute pirate bugs, and damsel bugs. We are also seeing some lady beetles, syrphid flies, lacewings and spiders in some light levels in some fields.

The following information is provided by the Texas Boll Weevil Eradication Foundation and is weekly trap catch averages.

| <u>Average number of weevils/trap/week</u> |             |             |             |
|--|-------------|-------------|-------------|
| <u>Week Ending</u>                         | <u>2007</u> | <u>2006</u> | <u>2005</u> |
| May 6                                      | .1882       | .0071       | .0229       |
| May 13                                     | .0752       | .0442       | .0148       |
| May 20                                     | .3245       | .0302       | .0443       |
| May 27                                     | .0422       | .0301       | .1435       |

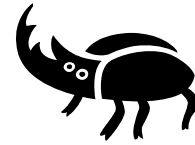
### Williamson County Website

Remember that this and all upcoming Southern Blacklands Pest Management Newsletters can be found at our County Web site:

<http://williamson-tx.tamu.edu>

You can also find links to copies of newsletters from the previous two seasons. In addition, you can find the Crops and Livestock Newsletter, and newsletter from all the Williamson County Staff. Also, there is plenty of information on Pest Control, Horticulture, Landscape Management, Gardening, CEU Opportunities, 4-H and Family and Consumer Sciences, etc.

## Upcoming Events



| <u>DATE</u> | <u>EVENT</u>          | <u>PLACE</u>                 | <u>TIME</u> |
|-------------|-----------------------|------------------------------|-------------|
| June 15     | Entomology Camp       | Stiles Farm Research Center, | 8:30 am     |
| June 19     | Stiles Farm Field Day | Stiles Farm Research Center, | 8:00 am     |

