



INSECTS AND WEEDS IN FOCUS

VOL 35 ISSUE 7

ENTO/SCS

June 25, 2010

Inside this issue:

- General Crop Conditions
- Headworms, Rice Stink Bug, and Midge on Sorghum
- You Say We have Grasshoppers?
- Grain Bag Use Expected to Increase
- Cotton Insects in Transition
- Interesting Insects

GENERAL CROP CONDITIONS

Sorghum, corn, sunflower, and cotton crops are rapidly maturing due to the hot dry weather even in areas where plentiful rain was received. Near our AgriLife Research and Extension Center, an area that did not receive as much rain, much of the cotton has reached cutout and is 3 to 5 nodes above white flower at this time. The rapid cutout was somewhat surprising to me in that I thought we had received just enough rainfall for the plants to grow a while longer before cutout. There are two fleahopper control studies at the location which we hope will provide useful information in the management of the pest in future years. Another fleahopper test near El Campo received substantially more rainfall. It should also provide good information.

Insect activity has been light to heavy in the crops. It seems that the stage of growth when the insects were on the move or laying eggs had a lot to do with whether infestations developed. I had two blocks of sorghum planted a little late set aside for headworm (corn earworm or fall armyworm) and/or rice stink bug studies and no insect pests occurred in enough abundance to establish a field study of any kind. There was sorghum planted about two weeks later than my plots at our location which now has a heavy infestation of headworms numbering near 7 medium to large size corn earworms per 10 sorghum heads. A test to evaluate 10 insecticides was established Monday, June 21.

HEADWORMS, RICE STINK BUG, AND MIDGE ON SORGHUM

All three pests are now present in various fields in the Corpus

Christi area. In most cases **rice stink bug** numbers have declined due to treatment or grain reaching hard dough. Where the bugs were not controlled in a timely fashion and their numbers were heavy, damage is very noticeable. The damage appears as small black seed or, if they attacked during the bloom stage, no development of seed is evident. The latter looks somewhat like sorghum midge damage, but no sorghum midge grubs or pupal cases are present. Closer examination reveals very small shrunken seed under the glumes.

Headworms, mostly the **corn earworm**, with a few **fall armyworm** have been present in heavy numbers in sorghum maturing at dates which evidently corresponded with moths egg laying when the plants were most attractive. So far high rates of the pyrethroid insecticides have provided control of the headworms. A few headworms can usually be found 4 days after treatment, but control has been judged to be as good as could be expected. The fall armyworm has not been present in enough numbers (except possibly in isolated fields in Kleberg County) as of this writing to even worry about using another insecticide. One must determine the species of headworm before treating since a change away from pyrethroid is necessary with high fall armyworm.

Watch for **sorghum webworm** in late planted sorghum. This insect is hairy, short length, somewhat blunt on both ends, and has a couple of stripes down the body. One can stand higher numbers of this insect per sorghum head compared to headworms. Refer to our sorghum guide for more detail.

Sorghum midge were finally detected on Monday June 21 at our location in enough numbers to require treatment. In this late blooming sorghum we used a high pyrethroid rate to take care of both midge and the small headworms that were present even though their numbers were not that great. I think we will have another round of corn earworm moths laying eggs about this time as they are about ready to emerge from the pupal stage from the soil in corn and older sorghum fields.

YOU SAY WE HAVE GRASSHOPPERS?

Grasshopper population increase is favored by a fairly mild, moderately dry winter followed in early spring by cool wet weather that prevents premature hatching. If the premature hatching does not take place, it is more likely that an adequate food supply is insured after hatching occurs. Under these conditions we would expect to have heavy populations of grasshoppers. Currently there are large numbers of grasshoppers in the Upper Gulf Coast counties as many telephone calls have been received from that area.

Control in small acreage is difficult due to re-infestation from surrounding areas. In cases where protection of gardens are attempted it is best to apply a product such as carbaryl (Sevin) to labeled garden plants as well as a 20 to 30 foot strip surrounding the garden. In cropland frequent treatment of the edge of fields and an outside strip will provide some protection. There are also directions on some Sevin insecticide labels for making a wheat bran bait for distribution in a wide band along field edges the hoppers must cross to get to a crop. I am not sure such bait labels still exist, but it would be worth searching for such labels. I currently have no time to

conduct such a label search.

Philip Schackelford, County Extension Agent, Austin County, is conducting a grasshopper control field study in coastal Bermuda grass to evaluate various insecticides. We determined several years ago the individual treatment plots must be 30 acres in size to gain useful data, and counts must be made in the middle of such plots. Results to date are shown in Table 1. Note that grasshopper numbers also declined in the nontreated grass possibly due to dispersal or decline in the food available for the hoppers. Note also that sustained control has been maintained for a period of time in the middle of the 30 acre blocks. Dimilin takes longer to see results since it requires molt of the immature hopper before they are killed; therefore, this product is only useful when the majority of the hoppers are immature (lack a full set of wings).

For perspective, an average of 6-7 grasshoppers per square yard on ten acres can consume the grass at about the same rate as one cow. During outbreaks when 30-60 grasshoppers per square yard are present, all grass may be destroyed.

Table 1. Grasshoppers control in coastal Bermuda grass, H.B. Schumann Farm, Austin Co., 2010.^{1/}

Treatment	Rate oz/acre	\$Cost/ acre	Grasshoppers/5 sweeps					Post trt. avg.
			0 DAT ^{2/}	3 DAT	7 DAT	17 DAT	24 DAT	
Dimilin	2.0	3.52	47.0 ^a	10.5 ^a	3.3 ^a	1.5 ^{bc}	0.8 ^c	4.0 ^b
Dimilin+ Baythroid	2.0 + 1.4	7.02	41.3 ^a	1.5 ^b	0.3 ^b	0.5 ^c	0.3 ^c	0.6 ^d
Baythroid	2.8	7.00	19.0 ^b	0.5 ^b	0.0 ^b	3.0 ^b	1.5 ^c	1.3 ^{cd}
Sevin XLR	32.0	9.55	29.3 ^b	2.0 ^b	2.0 ^{ab}	1.0 ^c	3.5 ^b	2.1 ^c
Nontreated			26.3 ^b	14.0 ^a	4.3 ^a	8.0 ^a	5.0 ^a	7.8 ^a
LSD (P = 0.05)			10.76	4.73	2.66	1.97	1.48	1.02
P > F			.0006	.0001	.0176	.0001	.0001	.0001

Means in a column followed by the same letter are not significantly different by ANOVA.

^{1/} Test conducted by Philip Schackelford, Austin County Extension Agent.

^{2/} DAT = Days After Treatment

GRAIN BAG USE EXPECTED TO INCREASE

A greater than average grain crop will likely pressure existing area grain storage handling facilities during and after harvest as has been experienced in the past. Producers will likely evaluate their options for storage including the use of grain bags for temporary storage. FARM Assistance Focus 2009-5, "Economics of Grain Storage in the Coastal Bend and Upper Gulf Coast of Texas," is available herein or at the link: <http://coastalbend.tamu.edu/Extension/Risk%20Management/Grainstoragebags.pdf>.

The publication compares the estimated costs for temporary grain storage comparing commercial elevators, on-farm bins, and grain bags. It also points out advantages and disadvantages of the grain bag storage technique. This information was provided by Mac Young, Extension Program Specialist-Risk Management.



Grain Bag

COTTON INSECTS IN TRANSITION

It has been a few weeks since we published a newsletter

and some catching up will be in order. We have moved away from **cotton fleahopper** concern to that of **bollworm** and **stink bugs**. Bollworm infestations have occurred in conventional cotton and required treatment. So far pyrethroid insecticide has done an adequate job on the bollworm.

Stink bugs have been noted in some fields and evidence of internal feeding reached near 20% of the quarter sized bolls which required treatment. There are other fields with little or no evidence of stink bug activity. Continue to scout for this insect.

INTERESTING INSECTS

Tiny Insect Brains Capable of Huge Feats

Insects may have tiny brains the size of a pinhead (much smaller in many insects), but the latest research from the University of Adelaide shows just how clever they really are. For the first time, researchers from the University's Discipline of Physiology have worked out how insects can judge the speed of moving objects. It appears that insect brain cells have additional mechanisms which can calculate how to make a controlled landing on a flower or reach a food source. This ability only works in a natural setting. Taken from <http://tinyurl.com/363z8uw>.

For more information contact:

Roy D. Parker
Extension Entomologist
rd-parker@tamu.edu

Dan D. Fromme
Extension Agronomist
d-fromme@tamu.edu

10345 Hwy 44
Corpus Christi, TX 78406
(361) 265-9203
Fax (361) 265-9434

We're on the Web!

Newsletter available at <http://agfacts.tamu.edu/~rparker/>

Pest Management information available
at <http://txaac.org/>



Educational programs conducted by Texas AgriLife Extension serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin. The information given herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas AgriLife Extension is implied.

The Texas A&M University System, U.S. Department of Agriculture, and the Commissioners Courts of Texas