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# PEST MANAGEMENT NEWS

Calhoun, Refugio & Victoria Counties

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VOLUME 9

ISSUE 8

July 11, 2013

## Current Conditions

Grain harvest is underway. Parts of the Texas Coast received rainfall this week at levels ranging from 0 to 3+ inches. While rain would slow harvest, the cotton, soybeans and sesame need the rain to finish out these crops.

Insect pressure has been relatively low in the past week. I have had several conversations with crop consultants and farmers about the lack of insects in fields. Continue to monitor susceptible fields.

## Grain Sorghum

Sorghum maturity ranges from soft dough to harvest. Sorghum is “safe” from insect pests once it reaches hard dough. Hard dough is when you cannot squeeze the grain between your fingers and the inside of the grain is relatively dry.

**Verde Plant Bugs** (*Creontiades*) are being found in sorghum fields. These insects feed and reproduce in sorghum but we are still unsure what, if any, pest status they hold in sorghum. Usually, I find them later in the sorghum as hard dough approaches. In previous years, I have found them at populations as high as 60+ per head. Their populations tend to occur with rice stink bugs so the control of the stink bugs also gets the Verdes and I have been unable to evaluate the Verdes in the absence of Rice Stink Bugs.

- Monitor for **stink bugs** and **headworms** until hard dough.
- Rice stink bugs and headworm are currently in sorghum fields as low levels
- Economic threshold calculators on the internet here:  
<https://insects.tamu.edu/extension/apps/>

## Cotton

Cotton fields range from mid-bloom to cut out; <5 Nodes above white flower (NAWF). Cotton fields are “safe” once the field has reached 450 HU past cutout. We accumulated 23 HU per day last week so cotton should be “safe” 20 days after cutout.

**Verde Plant Bugs** are increasing in numbers as sorghum fields dry down and are harvested and the look for another location to feed and reproduce. Look for evidence of **stink bug and Verde plant bug** feeding in cotton 10 days after first bloom using an economic threshold of 20% bolls with evidence of feeding.

Table 1. Heat Units accumulated at weather stations (<https://cwp.tamu.edu/>) to determine when cotton crops are “safe” from new insect pest infestations.

Date of Cutout (5 NAWF)	Heat Units Accumulated		
	Calhoun	Refugio	Victoria
June 20	386	499	486
June 25	308	378	372
July 1	186	224	216
July 5	103	137	131



Verde Plant Bug  
(*Creontiades signatus*)  
Adult and Nymph

## Soybeans

Soybean fields range from Mid-bloom to pod fill. Stink bugs are found in low numbers below treatment threshold.

- Scout fields for stink bugs with either a drop cloth or sweep net.
- Treat when stink bugs exceed 36 stink bugs per 100 sweeps or 1 per foot of row with drop cloth.
- Reduce the threshold to 24 per 100 sweeps or 2 per 3 feet if red-banded stink bug is a majority of species found.
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## Farm Safety

Farming and Ranching are in the top 10 of the most dangerous jobs in the United States. Over the past 10 years the Agriculture industry has been as high as the third most dangerous occupation reported as fatality rate per 100,000 workers.

In 2007, crop production had 4.8 workplace injuries and illnesses per 100 workers. Most of these involve livestock, tractors and other equipment and grain handling facilities. Most are preventable. Many of the fatalities and injuries are youth (who may be less safety conscious).

In short, **keep safety in mind** and use necessary precautions on the farm.

## Research Projects

Current field projects include:

- Sorghum planting rate in Refugio and Calhoun Counties
- AflaGuard use in corn for reducing aflatoxin in Refugio County
- Thrips control with foliar insecticides in Victoria County
- Fungicide use in grain sorghum in Victoria County
- Cotton Fleahopper control with foliar insecticides in Calhoun County
- Treating Bt cotton with insecticides for worm control Calhoun County
- Evaluation of stink bug thresholds on stink bugs and Verde Plant Bug Calhoun County
- Stink Bug control with foliar insecticides Victoria County

Looking for locations for the following trials:

- Stink bug and/or headworm control in Sorghum (Still needed!)
- Fall armyworm control in bermudagrass pastures

I am interested in conducting research to solve pest management issues on your farm. Call me if you have something I should look into. 361-920-1138

## Support for the 2013 IPM Program comes from the following:

Woodsboro Farmer's Cooperative  
WelFab, Inc.  
Hlavinka Equipment

South Texas Cotton and Grain Association  
Helena Chemical  
Numerous Producers

## INSECT PROTECTANT OPTIONS FOR STORED GRAIN

Dr. Roy Parker

Currently labeled products that can be applied to stored grain for protection against insects include Storcide II (wheat, barley, oats, rice, and sorghum but **not corn**), Actellic (corn and sorghum), Centynal (barley, corn, oats, rice, rye, sorghum, and wheat), Sensat (label expected soon), and Diacon (most grain types but not a stand-alone material in most cases). All of the products should be applied in a total volume of 5 gallons spray mixture/ 1,000 bushels.

Centynal is new to the market and contains deltamethrin one of the two products in Storcide II. It has been in only one of our tests which is underway at this time. The use rate varies with grain type, but the rate for corn and sorghum is 8.53 ounces/1,000 bushels of grain.

Storcide II has been in our testing program a number of times with good results. It contains deltamethrin + chlorpyrifos-methyl. Note that chlorpyrifos-methyl is not chemically the same as chlorpyrifos which should never be substituted because if it is you could get into really big trouble. Storcide II is labeled on several grain types with the use rate for sorghum at 11.6 ounces/1,000 bushels.

Actellic has also been in our testing program over the years again with good results especially when Diacon is added to the mixture to take care of the lesser grain borer on which Actellic has little activity. Even though we included Actellic (with Diacon) in our current test at the high labeled rate, its performance at lower rates has been generally good. We have even used it at below labeled rates with success but now suggest Actellic (9.2 ounces/1,000 bushels) + Diacon (3.5 ounces/1,000 bushels).

Sensat (spinosad) has been tested for years, and the company now has approval from foreign countries that held up the release for use. It is approved for many grain types. The use rates on corn and sorghum is 9.8 ounces/1,000 bushels.

Diacon as mentioned above is not a stand-alone material since it will not take care of the weevils. The product is an insect growth regulator which is active only on the immature stages of insects. As such it cannot contact weevil larvae since their eggs are laid inside kernels. The product is very active on the other stored grain insects and adds benefit when mixed with the other stored grain protectant insecticides. Generally we use 3.5 ounces/1,000 bushels.

None of these grain treatments should be used without attention to other pest management strategies to include bin and equipment cleaning, use of an empty bin treatment (Tempo, malathion and others), fumigation if the grain is infested such as would be the case if the grain is already in storage for a period of time, and use of proper aeration to include cooling of grain as soon as weather conditions allow. Never leave old grain piles outside the storage area!

Results of the current on-going stored sorghum test are provided below. Note that the insecticide performance is very good after 234 days. It is a little surprising that pest numbers have not been higher in the untreated grain.

**Table 1. Comparison of insecticides on stored sorghum for insect pests at the end of 234 days.**

Protectant	Rate oz/1,000 bu	Total insects per quart sample <sup>1/</sup>
Centynal	8.53	0.3 <sup>b</sup>
Centynal + Diacon	8.53 + 3.5	2.0 <sup>b</sup>
Storcide II	11.6	0.5 <sup>b</sup>
Storcide II + Diacon	11.6 + 3.5	0.0 <sup>b</sup>
Sensat	9.8	2.0 <sup>b</sup>
Sensat + Diacon	9.8 + 3.5	2.0 <sup>b</sup>
Actellic + Diacon	12.3 + 3.5	0.5 <sup>b</sup>
Untreated		7.5 <sup>a</sup>

<sup>1/</sup>Means followed by the same letter are not significantly different by ANOVA at the 5% level.