

# On The Farm

## News Letter August 2009

### UPCOMING MEETINGS

#### Deer and Hog Mega Fence Meeting

**Date:** Thursday, August 27, 2009

**Place:** West Side Bistro, (251-634-1982) located at 9943 Life Line Court. From Airport Boulevard take Snow Road North and then in about ½ mile take Life Line Court to the left. From Tanner Williams Road take Snow Road South and then take Life Line Court to the right.

**Time:** At 12 noon meet at West Side Bistro for lunch and short discussion then will head to Andy Thornburg's cotton fields on Airport Boulevard.

If you are having difficulty controlling deer and wild hogs in your crops this meeting may be helpful to you. As part of the field tour we will see the Deer and Hog Mega Fence in operation. We will also go to a second field of Andy Thornburg's where a variety of deer and hog repellants are being used to deter the wildlife. These two experiments are under heavy deer and hog pressure and both have been very successful so far this year.

Deer and hog damage to crops in Southwest Al alone is estimated to be around 16 million dollars. The Deer and Hog Mega Fence has been very cost effective and has taken a lot of the worry and work out of controlling the wildlife. The funds for this project were from the Alabama Cotton Commission. The plan for the fence was given to us by Mr. Charles Dean, cotton producer in Baldwin County.

#### North Florida Research and Education Center Peanut Field Day

**Date:** Thursday, August 20, 2009

**Place:** The NFREC in Marianna, Florida

**Time:** 8:00 a.m. until 1:30 p.m.

Topics are to include disease and nematode control and new peanut varieties.

For more information call 850-875-7100.

## Wiregrass Row Crop Field Day

Date: Friday, August 21, 2009

Place: Wiregrass Research and Extension Center in Headland

Time: 8:00 a.m. until 1:30 p.m.

## Corn Harvest and Storage

Corn harvest is well under way in Southwest Alabama. There are between 15 and 17 thousand acres in this area. Mid to late season droughts and high temperatures during silking took a toll on our crop. Some fields were devastated while most all others suffered lower yields.

Successfully storing the grain this past year has been a challenge for many. The most likely problem according to Dr. Kathy Flanders, AU Grain Crop Entomologist is that our insects have become resistant to **Malathion**, which used to give residual control of many insects in grain bins. Many growers, I think would agree.

**A goal for our growers is to not rely on fumigants to control insects in stored grain. This is possible as growers take the right steps in storing their grain.**

*A few very important steps to successful Grain Storage are:*

Clean and treat empty grain bins with a residual insecticide. Treat the bins inside and outside and treat the pad for a five foot area around the bin. It is important to spray the entire surface of the bin, as far up as can be reached with the spray. There are many residual insecticides to choose from. Tempo 20 WF and **Tempo SC Ultra** are a good choice to start with. The Tempo SC Ultra is a little easier to handle than the Tempo 20 WP.

Treat the entire grain mass as it is loaded into the bin. For wheat a good treatment is Storicide II. Another good choice is Pyronyl Crop Spray in combo with Diacon II. **For corn Actellic 5 EC alone, or Pyronyl Crop Spray in combo with Diacon II is a good choice. Storicide II is not labeled for corn.**

## Tips for Successfully Storing Corn on the Farm

Dr. Kathy Flanders, AU Grain Entomologist

The Southeast's warm, moist climate makes southern grain bins especially vulnerable to insects and molds. This is because insects and molds grow faster in warm weather than in cool weather. Stored grains can fall victim to a variety of insect pests. There are primary pests, which attack healthy, intact kernels; and secondary pests, which feed on particles and grain dust thus reducing the stored grain's quality.

Grain quality does not improve during storage. The best that can happen is that the grain is the same quality coming out of the bin as when it goes in. A good insect pest management program will also minimize mold problems, since insects and molds have similar growing requirements.

Grain bins are designed for easy loading and unloading of grain as well as for protecting it from rain, birds and rodents. They are not well equipped to keep out small insect pests. There are a lot of holes, by design or otherwise, that are going to let in bugs. Seal unnecessary openings with caulk or expandable foam. Duct tape and plastic may also be used.

The first line of defense is to eliminate any insects that are left over from the previous batch of grain. While some of these insect species may be brought in with the grain at harvest, most have been in and around the bin for a long time. Some insects that attack stored grain live as long as 3 years.

Therefore, before you start harvesting your corn, take the time to clean the bins thoroughly to eliminate starter colonies of insects or molds that could threaten the stored corn. This includes a thorough vacuuming or sweeping to remove insect debris and remaining grain. Crop residue and dust will reduce the efficacy of empty bin insecticide treatments, another reason to do a thorough cleaning.

Next, apply an EPA-approved insecticide to treat the grain bin floor, inside and outside walls and the concrete pad around the grain bin. This empty bin treatment will kill insects that remain in the bin, even after cleaning. It will provide some protection against future invasion. See "Stored Grains Insect Control for 2009" (<http://www.aces.edu/pubs/docs/A/ANR-0500-A/VOL1-2009/stgrain.pdf>).

Corn should be loaded into the bins at the correct moisture content. For aerated grain bins, the recommended moisture content is 14% if the corn will be stored for 6 months or less, 13% if corn is stored for 6-12 months, and 12% if the corn will be stored for more than 1 year.

If the corn will be stored for longer than a month, it should be treated with an EPA-approved insecticide as it is loaded into the bin. If the corn is at the correct moisture content when it comes from the field, the sprayer nozzle can be positioned down by the auger pit. It is important to know that heat breaks down the protectant insecticide. Therefore, if corn is dried at the storage site care should be taken to apply the insecticide when the grain is cool, or at the point where the grain going into the bin is at its coolest point.

Grain should not be loaded above the vertical sides of the bin. The pitched head space is needed to allow access to the grain, to allow effective aeration and, if the need arises, to conduct an effective fumigation. If the bin is not equipped with a grain spreader, the peak of corn remaining after loading should be flattened out. A grain peak harbors moisture, which encourages insects and molds to grow.

As autumn approaches, night temperatures will be low enough to make aeration effective. Running the aeration fans long enough to cool down the grain can pay big dividends. This is because stored grain insects do not grow below 60 degrees Fahrenheit. It is not necessary to wait until night temperatures dip below 60 degrees before aerating. For example, insects will grow much more slowly at 70 degrees than at 80 degrees. The grain can be cooled down in steps, until the temperature is below 60 degrees. Deciding how long to run the aeration fans can be tricky. If a grain thermometer is available, you can measure the temperature of the grain directly. Otherwise, estimates of the number of cooling hours required can be made based on the power of the aeration fans. It will take at least 12 hours and sometimes several days, to move the cooling front of air through the bin. For more information on aerating grain bins, see the publication "Grain Storage Guidelines for the Southeast":

<http://www.aces.edu/dept/grain/documents/aerationmanual.pdf>

Stored grain should be checked at least once a month to see if insects are present. It is not enough to look in the top hatch to see if anything is crawling around. If you can see an insect infestation using this method, you have a serious insect problem. Push a long brass grain trier down into the corn in order to get a sample of the corn (see Figure 10 in the publication "IPM Tactics for Stored Grain," <http://www.aces.edu/pubs/docs/A/ANR-1126/> (for a picture of a grain trier).

Sift this into a shallow pan through a strainer with holes just small enough to keep the corn from falling through. Vegetable colanders from the discount store work well for this purpose. Look in the sifted material for insects. If more than two weevils (look for the long snouts) are present, or more than 10 other live insects are found, the corn quality is downgraded to "infested" status. Inexpensive pitfall traps can be purchased and used to detect insects in stored grain (see Figure 11 of "IPM Tactics for Stored Grain"). Push the traps down into the grain. Then come back in a couple of days to see what insects have fallen into the traps.

If weevils are found in the stored corn, and you are using it for on-farm feed for animals, try to use up the infested corn as soon as possible. If you plan on selling the corn, you will need to eliminate the insect infestation if the population exceeds the tolerance of the buyer. Unfortunately, the only way to get rid of insects once they are in a grain bin is to fumigate. More information about fumigating grain bins can be found in the publication "Fumigating Agricultural Commodities with Phosphine":

<http://www.aces.edu/pubs/docs/A/ANR-1154/>

An alternative strategy, if you have extra storage capacity, is to move the grain from the infested bin to a clean bin, and spray a grain protectant on the grain as it is moved. Be aware that physical damage to corn kernels occurs each time grain is loaded and unloaded.

Grain bins, like many locations on the farm, are dangerous places. Use caution in and around grain bins. See the publication "Grain Bin Hazards and Safety Considerations":

<http://www.aces.edu/pubs/docs/A/ANR-1332/ANR-1332.pdf>

## Battle of the Bugs

From reading University Insect reports from other states around the South it appears that the insects started in Lower Alabama primarily Baldwin and Mobile Counties and then traveled North, South, East and West. July was a heavy month for stink bugs and worms on all of our crops. August should be another month of battling these insects.

Would like to encourage growers to especially scout their soybeans especially as they come into the reproductive stages as this is where pod worms and stink bugs can ruin a crop over night. A crop may look fine from the road, but have nothing on it when you go to harvest.

**Stay in tune with growers and consultants in your area.**

One of the best ways to stay in tune regionally with our crops is Owen Taylor's news letter:

<http://agfax.com>

Another good source of information is the Mississippi Crop Situation:

<http://msucare.com/newsletters/pests/cis/index.html>

## Cotton Insect Update

By: Dr. Phillip Roberts, UGA Cotton Entomologist

Another good source of information is Dr. Phillip Roberts, UGA Cotton Entomologist, *INSECT UPDATES*: Check the **Cotton Insect Hotline (1-800-851-2847)** for updates on current insect conditions. The Cotton Pest Management Newsletter and additional cotton production information is also posted on the UGA Cotton Homepage at: <http://www.ugacotton.com>

The Georgia Cotton Insect Situation is often very similar to ours in Alabama.

**INSECT SITUATION:** Fall armyworms and corn earworms continue to be the two pests we are receiving the most calls about. We should not forget about stink bugs as threshold numbers are present in many areas. Based on the number of calls received, spider mites appear to be more widespread than during previous weeks. Beet armyworms continue to be reported from scattered areas.

**FALL ARMYWORM:** FAW have been reported at treatable populations from several areas (especially SW Georgia). FAW larvae are generally found feeding in blooms and or bolls in the mid to lower plant canopy. Small FAW and corn earworm (CEW) larvae are very similar in appearance. One clue to identifying small FAW larvae is the presence of etching on the inner surface of boll bracts. Small FAW larvae will often etch the inner surface of boll bracts until large enough to feed on developing bolls. Larger FAW larvae will typically chew into the basal or lower portion of bolls. FAW can damage larger and more mature bolls compared with CEW.

Due to propensity of FAW to feed in the mid and lower canopy, coverage and penetration of the plant canopy with insecticides is extremely important. Control of FAW is difficult due in part to coverage issues and we should not expect or attempt to "zero out" an established FAW population. The threshold for FAW is about 2 times that of corn earworm. High rates of pyrethroids provide good suppression when small FAW (<1/8 inch in length) are treated. When we see control of small FAWs with pyrethroids, the application often targeted other pest such as corn earworm or stink bugs. Pyrethroids will not control large FAWs, and higher rates of non-pyrethroid insecticides will be needed. Several insecticides are suggested for control of FAW in

the Pest Control Handbook; Diamond at 9 ozs. per acre has performed well in several areas. Diamond and Intrepid have limited activity on CEW and a pyrethroid should be tank-mixed with those insecticides when both CEW and FAW are being treated. Several non-pyrethroid insecticides have activity on both FAW and CEW. When targeting FAW, every effort should be made to maximize penetration and coverage of the plant canopy.

**CORN EARWORM:** CEW activity varies by location. It takes about a month for CEW to develop from egg to adult. In southernmost Georgia it has been about 4 weeks since we first observed CEW infestations. We have received several reports this week from southernmost Georgia that moth activity and egg lay is increasing, Chapter 2. Sustained egg lay occurred for 2+ weeks during the July generation in many areas so there was not much of a lag in pressure. Be sure to monitor all cottons for CEW and FAW. The two gene

Bt cottons WideStrike and Bollgard II have provided improved control of CEW and FAW compared with single gene Bollgard, but have required supplemental foliar sprays in some fields.

***STINK BUGS and OTHER BOLL FEEDING BUGS:*** Be sure scouts are monitoring bolls for stink bug damage. With the increased CEW and FAW activity, bug sprays should only be made on an as needed basis. If you exceed the boll damage threshold for bugs, treat the bugs. However, be aware of potential CEW and FAW infestations. When treating stink bugs consider including a pyrethroid in the application if numerous small larvae are observed.

***SPIDER MITES:*** Spider mites appear to have become more widespread in the past week. Watch fields closely for plant damage and mites, populations can build quickly. Recent rains have slowed mites down, but will likely not eliminate them as a potential pest.

### **SBR: Asian Soybean Rust**

Asian Rust was found on soybeans in Washington County in June and recently on July 21 at the Fairhope Research station by Dr. Ed Sikora. On August 6<sup>th</sup> Asian rust was found in soybeans in Thornton MS. This was the first citing in MS this year and also the farthest North location of Asian Rust in the total United States to date. Asian Rust has also been found in our neighboring state Florida. Our area is still considered **LOW RISK** for SBR. Soybean Asian Rust does not typically sporulate in temperatures over 90 degrees F. However, the cooler night temperatures we have been having have allowed the disease to progress slowly.

It is recommended that growers consider applying fungicides to soybean fields that have a good yield potential (30 + bushels). Timing of spraying to receive the most benefit from a fungicide is the late R3 to R4 stage of growth. The R3 stage begins when pods are 3/16 of an inch long at one of the four uppermost nodes on the main stem with a fully developed leaf. The R4 stage is called full pod and the pods are 3/4 of an inch long at one of the four uppermost nodes on the main stem with a fully developed leaf. Since it is likely our fields have been exposed to SBR, a tank mix combination of a strobilurin and a triazole fungicide, or a prepackaged tank-mix of the two products, would be most beneficial. Fungicides at this time will also help control Frog-eye, Cercospora and other diseases.

***Fungicides used before bloom, are not considered economical.*** Though symptoms of soybean rust can occur on soybeans before bloom, this has not yet been observed in Alabama. Soybeans that have reached the **full pod-R6 growth stage should not be sprayed** as there appears to be little benefit from a fungicide application after this growth period has been reached. There have been several changes this past year to the fungicides that will be and are now labeled for management of soybean rust. In this multi-state effort, Daren Mueller of Iowa State University has taken the lead to keep track of the constant changes. These are now posted on the soybean rust fungicide manual website:

<http://oardc.osu.edu/soyrust/> in Appendix B.

For more information and better understanding of the rust situation call the **Soybean Rust Hot Line: 800-446-0388**.

For more information on soybean rust, view the USDA rust information web site at: [sbr.ipmpipe.org](http://sbr.ipmpipe.org)  
When viewing the national map, click on Alabama to read my weekly commentary and recommend management practices for the state.

## Peanut and Vegetable Insect Advisory

1-800-446-0375

Dr. Ayanava Majumdar [AZM0024@auburn.edu](mailto:AZM0024@auburn.edu) 251-331-8416 is collecting pheromone trap data and has insect advisory information on this hot line. Information will be updated weekly.

Again, I hope this information has been helpful to you.

Sincerely,



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