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July 28, 2009

Dear Row Crop Producer:

Enclosed is some information I hope you find helpful. Be sure to take note of the close out of the insecticide Furadan at the end of the year. Fall Armyworms have been reported in soybeans as close as Leighton and they have sprayed for them in sod near Centre, Alabama. Keep a close watch on your crops and pastures.

Let us know we can assist you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Randall Armstrong".

Randall Armstrong  
County Extension Coordinator

## Recent Cancellations Involving Furadan Insecticide

On May 11, 2009, the EPA announced they were formally revoking all food tolerances for the insecticide carbofuran, trade name Furadan, effective December 31, 2009. Furadan has been registered and used in Alabama for more than 30 years, and currently has a label that allows for applications to corn, soybeans, alfalfa, potatoes, and rangeland/pastures. While EPA has not cancelled the actual label for the product, it will do so sometime in 2010. The fact that they revoked the food tolerances means that after 2009, if any food commodity is found to contain any residue of carbofuran, the Food and Drug Administration (FDA) would have authority to condemn and order destruction of that commodity, and EPA would have authority to take enforcement action against the applicator of the Furadan, if they could determine where the residue came from. It is critical for all applicators, who currently have Furadan, to understand there is no recall program for unused Furadan after 2009. Any inventory found after December 31, 2009, will be ordered disposed at the expense of the owner. Landowners and applicators with Furadan are asked to use the product according to label directions before December 31, 2009, and contact a licensed waste disposal contractor for any remaining product. If there are questions, please contact ADAI at (334) 240-7237.

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## Corn

### Is Your Corn Field Ready for Harvest?

Brenda Ortiz  
Grain Crops/Precision Ag Extension Specialist

The degree of maturity determines the order in which farms or fields are harvested. It is also related to potential yield losses associated with kernel breakage or loss, and contamination. Harvesting corn at the right moisture content can also reduce attack by insects and mold fungi. Studies from Purdue University have shown that if mature corn grain is allowed to dry down 10 % points in the field (e.g. from 28% to 18% grain moisture content), the potential yield loss would be 10%. If you have drying and storage facilities, harvest should begin when the moisture content is 28-30%. However, studies indicate that the optimum is 25% moisture content. If you want to avoid drying costs and the grain is going directly from the field to the local buying points, the moisture content should be around 15%.

The corn plant accumulates growing degree-days (GDD) or heat units every day during the growing cycle. Changes in the minimum and maximum ambient temperatures through the growing season are directly related to the accumulation of GGD, hence delaying or accelerating the date of physiological maturity. For example, if ambient temperatures are above average; physiological maturity will occur sooner than usual.

Harvest date is influenced by hybrid maturity rate (early or late), ambient temperature, and geographic location. Then, real time accumulation of GDD at your farm or at a location nearby can provide a good indication of the days to physiological maturity. In addition, cumulative GDD calculated from historic weather data can also provide good insights to the harvest time frame.

The Southeast Climate Consortium (SECC) has developed a web-based GDD tool, as part of Agroclimate ([www.agroclimate.org](http://www.agroclimate.org)), that allows you to predict GDD accumulation for the current season (In the case of Alabama, this accumulation is based on historic weather data). Using this tool, you can estimate the cumulative GDD for a corn field planted in a particular county and date. If you want to learn more about how to use this tool, consult the publication:

“Degree Days: Heating, Cooling, and Growing” from the University of Florida”

[http://edis.ifas.ufl.edu/pdf/FILES/AE/AE4280\\_0.pdf](http://edis.ifas.ufl.edu/pdf/FILES/AE/AE4280_0.pdf)

## Avoid Post-harvest Aflatoxin Contamination

Brenda Ortiz

Grain Crops/Precision Ag. Extension Specialist

Aflatoxin is a carcinogenic toxin produced by the fungi *Aspergillus flavus* and *Aspergillus parasiticus*.

Contaminated corn is especially toxic to young animals and poultry. Therefore, if the corn is intended to feed young livestock, young cattle or humans, it cannot exceed the level of 20 ppb for aflatoxin. Corn grain exceeding these levels cannot enter interstate commerce and can only be used for livestock feed. The fungus can be visually recognized by a yellow-green or gray-green mold growing on corn kernels (Figure 3).

Pre- and/or Post-harvest Aflatoxin contamination of corn kernel is possible. Pre-harvest contamination usually occurs due to drought and heat stress during kernel filling. However, many other factors favoring plant stress (e.g. fertilization, lack of irrigation, insect pressure, plant population and planting date) can be conducive to contamination. Post-harvest contamination may occur when harvesting, drying, and/or storing the corn. Here are some recommendations to avoid Postharvest Aflatoxin contamination:



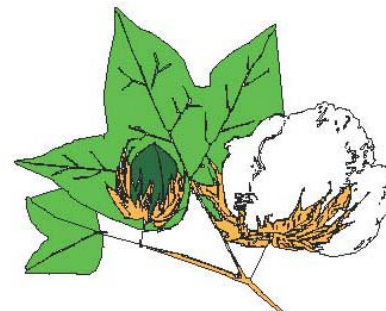
**Figure 3.** Visual symptoms of *Aspergillus flavus* contamination on a corn ear. (Photo: Alison Robertson – Iowa State)

1. CLEAN bins before storing: sweep down the sides of the bin and use an insecticide to treat the bin before filling.
2. Begin harvesting at grain moisture of 28 to 30%. If moisture  $\leq$  15%, kernel breakage during harvest is possible which may favor contamination during storage.
3. Threshing – use plenty of air when harvesting to remove foreign matter, weed seed and light chaffy grain. 4. If possible, harvest and store nonirrigated areas (outside of the pivot) separately.
5. Stored moist grain will be highly susceptible to contamination, then it must be dried immediately before it can be placed in storage.
6. After drying, grain should be cooled. Storage temp. should be maintained between 34°F–39°F degrees.
7. If you use a Batch-in-drying (wet grain is dried and cooled in a bin and then transferred to storage), dry to an average moisture content of 12%.
8. During summer time, stored grain should be maintained between 50°F– 59°F degrees.
9. Aeration is key to maintain uniform temperature within the bin and reduce moisture migration, especially on the top of the bin which may favor aflatoxin contamination.

# Alabama Cotton Picksack Newsletter

## July 2009

- ❖ **Cotton Overcoming Early Stresses:** *Dale Monks*
- ❖ **North Alabama Crop Insect Update:** *Tim Reed and Barry Freeman*
- ❖ **July Worm Control:** *Ron Smith*
- ❖ **Scouting For Herbicide-Resistant Weeds:** *Mike Patterson*
- ❖ **Cotton Economics:** *Bob Goodman and Max Runge*




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### **Cotton Overcoming Early Stresses:** *D. Monks, Extension Agronomist*

The weather over this growing season has proven to be somewhat of a “Jekyll and Hyde” experience. While the early season brought heavy rains, rainfall suddenly became scarce for many of our producers across the state. Stories of drought conditions for over a month were common many areas and the southern counties were 10 degrees or so warmer than the central areas as recently as last week. Temperatures over 100 were also present across the state. Time will tell if there are any lasting effects on our crops, especially corn.

In visiting cotton fields in some areas of central and southern counties this week, it looks like much of the cotton is growing well and setting squares. Older cotton is blooming and setting bolls in some areas but there are some areas where the crop is yet to start squaring. While cotton-growing conditions are much improved, the crop is still behind what we would have expected if planting had occurred on time. The stand in some fields is also not perfect due to heavy rains and delays. We visited a peanut field earlier this week where half the field was behind the rest because of a 3-wk delay caused by extended rainfall during the planting operation. Most of our row crops were rated in the “fair” or “good” category on July 6, with little in the excellent range. Hopefully that changed with the rainfall we received earlier this week.

### **North Alabama Crop Insect Update:** *T. Reed, Extension Specialist and B. Freeman*

Variable rain fall amounts across much of north Alabama July 5 have given renewed hope to many row crop producers. Most of the older cotton (cotton that is blooming) in north Alabama has been sprayed once for tarnished plant bugs and square retention is dropping in the younger cotton that hasn't been sprayed to date. Consultants report that tarnished plant bug numbers in soybeans are down this week compared to last week, indicating an increased movement to cotton. Consultants are concerned that pyrethroid sprays for plant bugs may encourage aphid populations to increase. Aphid numbers have been relatively low to date and few acres have been treated for aphids. Spider mites continue to be spotty and less than 2% of fields have been treated for mites. Bifenthrin was applied to some mite-infested fields to also control plant bugs. Brown stink bug numbers are above normal levels in many corn fields and these pests will be moving to cotton and soybeans soon. The first bollworm/budworm egg was found in the experimental plots at the Tennessee Valley Research and Extension Center July 6. One consultant reports *Heliothine* egg counts as high as 5% in some cotton fields. Conventional cotton should be monitored closely for *Heliothine* eggs and worms.

### **July Worm Control:** *R. Smith, Extension Entomologist*

If 2009 goes as the last 30 or so years, we can expect to have some level of both bollworms and tobacco budworms during the month of July. Egg deposition will usually occur during the first 10

days of July, with higher numbers in the southern counties. Historically this flight has been tobacco budworms. About the time this budworm flight subsides, the bollworm flight will begin (about July 12-15 in the south and about July 18-21 in central Alabama). Generally, worm activity occurs about 7-10 days later in northern Alabama. Things could happen a little earlier in 2009 due to the above normal heat units that have accumulated in recent weeks.

Control efforts by growers will depend on what technology they have planted. If they have planted Bollgard™, Bollgard II™, or Wide Strike™ varieties, the tobacco budworm can be ignored. These growers will only need to be concerned about the bollworm flight, which generally produces some escapes in Bollgard cotton. In research plots, Bollgard II reduces the number of escapes by about 90%. Wide Strike varieties could need an overspray for bollworms under heavy pressure. Growers who have planted true conventional or Roundup™ only varieties will have to be much more observant. Hopefully, beneficial insects will contain early July budworms to acceptable levels of damage. Pyrethroids can then be used economically for the mid- to late-July bollworm flight. For the remainder of the season (August/Sept.), we can expect a mixture of both budworms and bollworms. Varieties without the Bt technology will have to be treated with insecticides that will control both bollworms and budworms whenever economic levels of worms appear. This could get expensive in a hurry and is why we don't need to fight the early July budworms. It is more economical to protect August bolls than early July squares. Non-Bt cotton varieties must be scouted often and very carefully. We now have excellent budworm insecticides (Tractor™, Steward™ and Belt™) but none are clean-up materials on large worms.

#### **Scouting For Herbicide-Resistant Weeds:** *M. Patterson, Extension Weed Scientist*

There are several herbicide resistant weeds in Alabama. Common cocklebur resistant to MSMA was found in central Alabama as well as goosegrass resistant to trifluralin and Prowl™ in Cherokee county, horseweed resistant to glyphosate in North Alabama, and now glyphosate-resistant Palmer pigweed in South Alabama (specifically Barbour County documented in 2008). Resistant common cocklebur and goosegrass have not spread since their documentation in the late 1980's. According to farmers and consultants, glyphosate-resistant horseweed is present in many fields in the Tennessee Valley. Controlling the horseweed prior to planting using additional burndown treatments including 2,4-D, dicamba, Ignite™, etc. is imperative, but horseweed is apparently germinating once the summer crop is up also. This means we will have to apply soil-residual herbicides at planting to help provide control as well as killing the horseweed prior to planting.

We will probably see more fields where glyphosate-resistant Palmer pigweed pops up in the future. I heard a report of hard-to-kill pigweed in some south Alabama fields last year and more will be discovered this year.

What should farmers do if they suspect resistance? First, make sure the proper rate of herbicide was applied to the weed at a stage when it should have been controlled. Spraying eight inch pigweed with a half rate of glyphosate will not work. If the proper rate (22 fluid oz Roundup Powermax™ or Weathermax™, or 32 fluid oz of a generic) was sprayed on small (less than three inch tall) pigweed without success, then you may have a problem. Spray again with the 32 ounce rate (on RR Flex™ cotton varieties) as soon as possible and look 7 to 10 days afterward. If this doesn't work, call your regional extension agent and ask if they can visit the site on your farm. Regional agents have small backpack sprayers that they can use to spray small test areas. The agent can spray this pigweed with a three percent solution of Roundup Weathermax or Powermax. If the pigweed is not significantly affected within 10 days, then resistance has probably arrived in your field.

## Cotton Economics and USDA Acreage: B. Goodman and M. Runge, Extension Economists

The long-awaited USDA June plantings report has arrived. You can access it at: <http://usda.mannlib.cornell.edu/usda/current/Acre/Acre-06-30-2009.pdf>.

The “planted acreage” for corn is estimated at 87.0 million acres, up only 1% from last year, but a very large acreage – 2nd largest since 1947. The soybean crop is forecast at 77.5 million acres, up 2% from last year. Harvested bean acreage will be largest on record, if realized. Wheat acreage is forecast to be 59.8 million acres, down 5% from last year. All cotton is forecast at 9.05 million acres, down 4%. Upland is also down 4% at 8.91 million acres. All cotton and upland acres are the lowest since 1983. Mississippi and Louisiana farmers planted the lowest acres for their states on record, at 270,000 and 240,000 acres, respectively.

In summary, US farmers planted 4.6 million acres more than forecast in the March planting intentions report. Corn came in above the highest pre-report guesses by the experts. Soybean acres were up a million from March. The cotton number was right in line with the highest pre-report guesses.

Initial reaction to these numbers, on a day when the DJIA was down over 100 and the dollar was up, was pretty grim. Corn was especially hit hard, of course. September corn was locked down all day. Beans were down pretty good too for a while but came back. December cotton was down around 100 points initially but gained it back within a couple of hours. For cotton, the acreage difference between the low pre-report guess and the high pre-report guess likely amounts to less than 500,000 bales. Given the importance of the economy in the demand side of the price-discovery equation, traders must not be putting a lot of importance or emphasis on the supply side. I mean, we could sell China a half million bales in a single day.

### Here are the cotton numbers for the Southeast:

State	08 Planted (000)	09 Planted (000)
Alabama	290	250
Georgia	940	980
Tennessee	285	340
South Carolina	135	140
North Carolina	430	380

Alabama and North Carolina lost cotton acres, Georgia, Tennessee, and South Carolina had an increase. But Texas is where all the cotton is these days, and it's what goes on in Texas that moves the market, at least in terms of prospective supply or U.S. production numbers.

**Market Response:** This spring, it was disappointing that the cotton market was not performing as well as the grains. The grain markets have experienced high prices relative to loan rates, while the cotton market has not. After last week I am no longer envious. September corn lost about a dollar per bushel and beans and wheat were hard hit as well. The DJIA is down big, crude is off over \$5 per barrel, and the dollar is up. It's kind of like the perfect storm I guess. The dust has not yet settled and nobody (really) knows why cotton is up, but it is. I'm sure our hindsight will again be 20/20. Some experts say this is a good chance to lock in some cotton, and I would never argue against it because the future is highly uncertain.