

## **IPM NEWSLETTER**

### **Update for Field Crops and Their Pests**

No. 26

September 6, 2007

Past newsletters and other information can be found at [UTCrops.com](http://UTCrops.com)

Bookmarks: [Cotton update](#) [Burn permits for field residue](#) [Insect boll damage survey](#) [Farm management](#)

#### **Cotton Progress Report (Chris Main, Extension Cotton and Small Grains Specialist)**

**Cotton tour next week** (Wednesday September 12) at the West Tennessee Research and Education Center in Jackson, TN. The Center is located at the corner of Airways Blvd. and Highway 45 bypass. Follow signs along the station drive way to the parking area. We will start registration at 7:30 am and the tour begins promptly at 8:00. You will see cotton variety trials, defoliation treatments, late season weed control, late season insect control, nitrogen and potassium regimes on 20 year old no-till plots, and foliar fungicides for cotton. We will end the tour prior to lunch so producers can get home in time to begin harvest. Please see the program announcement at [http://www.utextension.utk.edu/fieldCrops/cotton/cotton\\_images/Cotton%20Tour%209-12.pdf](http://www.utextension.utk.edu/fieldCrops/cotton/cotton_images/Cotton%20Tour%209-12.pdf).

Defoliation demos are being set up in several counties to show how different defoliation products are working this year. We have 8 different treatments including Def, Dropp, Firstpick, Finish, Aim, ET, Blizzard, and Prep applied at rates to reflect the changes in temperature. The first field days associated with these demos will be held on:

#### **Defoliation Field Days**

- **Tuesday September 11 -- next to UAP, Highway 412, Crockett Co.**
- **Thursday September 13 -- just west of Dandridge John Deere, Highway 64, Fayette Co.**

The Tennessee agricultural statistics agency reports that 78% of the crop has open bolls compared to 53% last week, 31% last year, and well ahead of the 5 year average of 27%. 8% of the crop has been defoliated compared to not reported last week, 3% last year, and ahead of the 5 year average of 2%. I expected to see a big increase in defoliated acres in next week's report since most non-irrigated fields that I have seen this week have been sprayed. Cotton condition is rated as 7% very poor, 25% poor, 40% fair, 22% good and 6% excellent.

**Defoliation.** Since the extreme temperatures have passed we need to increase our rate of Def/Folex to the 6-8 oz range. Keep Aim and ET rates low but consider adding a surfactant or Crop Oil. The weather forecast is calling for highs in the mid to upper 80's and lows in the mid 60's. Expect leaf dropp activity with Dropp/Freefall to decrease. It is time to start adding a herbicidal product to the mixture. I would continue to use some Dropp 2.4 oz/ac for re-growth prevention. Ethephon rates of 24-32 oz. are still working well. Some producers are using 40 oz. on larger cotton which is helping open the top bolls.

**Boll Opening.** Some abnormalities in boll opening have occurred with a couple cotton varieties due to the extreme heat during August (see picture below). Please pay attention to boll condition after

defoliation. If you see excessive hard lock, please contact your county Extension agent so we can accurately assess the severity and magnitude of the problem. Be prepared to report the variety with the problem and the planting date.



**Preliminary Yield Estimates.** We have harvested two county variety trials so far. Please do not be shocked when you defoliate your fields. Dry-land fields DO NOT have a top crop. It looks much like a moderate to heavy boll weevil year from years past. To be honest, yields are not as bad as they appear from the road. We DO NOT have lint percentages calculated for each variety yet, so these are only estimates. To get a rough idea we use 38% ginout as a standard rate to estimate these yields. At Jackson, lint yields based on 38% ginout ranged from 1010 down to 582 lbs/ac with an average of 796 lbs/ac. The leader was Delta Pine 444 BG/RR with Phytogen 310 R and several Flex and Liberty Link varieties above 900 lbs/ac. At the Shelby county location, yields ranged from 747 down to 493 lbs/ac with an average of 630 lbs/ac. This test had two DynaGro Bollgard II Flex varieties (2242, 2100), Stoneville 4427 B2RF, Phytogen 310 R, and Delta Pine 444 BG/RR at or above 680 lbs/ac. While these yields are nothing to celebrate, they are well ahead of what most people estimated for these dry-land sites. One thing I have noticed is that cotton planted prior to May 5<sup>th</sup> is looking, and yielding better than cotton planted after that date. This is most likely due to the environmental conditions that the different planting dates experienced during peak reproductive periods.

I hesitate to put all the yield data in this newsletter since we do not have actual ginout percentages yet. If you are interested in a specific variety, please contact me and I will provide you with what we are seeing so far. I have stopped the DD 60 accumulations since most fields have been defoliated. I will also start to include some information on wheat in next week's edition.

**Burn Permits Required for Burning Field Residue (Angela Thompson, Corn and Soybean Specialist).** Although many counties and cities have issued local “no-burn” notices, there is currently no statewide ban on burning. Producers who wish to burn residue off fields in order to plant wheat are required to seek permission from their county Division of Forestry office (which is usually housed with the local Department of Agriculture). Permission is issued on a county-by-county basis based on rainfall received in that area. Lake and Crockett counties do not have a local Forestry office and those residents can call the Dyer county office at 1-866-468-4784 for that information. Producers in other counties should contact their local county Forestry office for permission. With the widespread rains we are getting today, it is likely that many local burn bans will be lifted.

### Insect Boll Damage Survey (Scott Stewart, IPM Specialist).

The following data are the summarized result of an annual boll damage survey done each year. In recent years, these surveys have been done in the County Standardized Variety Demonstrations. 300 bolls are sampled in selected varieties at each location. Tests at 13 locations were surveyed this year (= 3900 total bolls per variety). The survey is done once per field near the time the first open bolls are present. This year, all samples were taken in mid August. The survey underestimates total insect injury because it does not account for injury that caused square or boll shedding. However, I think it gives a good relative “snapshot” of mid and late season insect pressure.

**2007 Percent Boll Damage - Averaged Across 13 Locations\***

Variety	Worm	Stink bug or Plant bug	Total
DP 444 BG/RR	0.18	2.59	2.77
PHY 370 WR	0.13	3.00	3.13
ST 4554 B2RF	0.08	2.38	2.46
PHY 310 R	0.72	3.41	4.13

\* Damage = any penetration of boll wall. Worm = bolls injured by caterpillar pest; Bug = stink bug or plant bug injury; Rot = any rot not apparently caused by insect.

I am showing this data to make a couple of points. First, you can compare the relative efficacy of the various Bt traits (Bollgard, Bollgard II and WideStrike). Over the years, Bt cotton has consistently reduced boll damage caused by caterpillar pests. Most noticeable for 2007 was the very low caterpillar damage (which for Tennessee is usually from bollworm). Non-Bt cotton averaged 0.7% “worm” damaged bolls. This is by far the least recorded since I’ve been in Tennessee. From 2002 - 2006, average worm damage in non-Bt cotton has ranged from 2.1-9.3%, depending on the year.



Another point, despite generally low to moderate mid-season populations of plant bugs and stink bugs, boll injury was similar to recent years and actually higher than last year. These numbers are not particularly high, but they are averages, and some fields had 7-10% “bug” injury. Why is there just as much “bug” injury in low pressure years vs. high pressure years? We spray less when pest numbers are low, and sub-threshold populations are going to cause some injury even if you can’t justify an insecticide application. Also, there are always some fields that should have been treated or treated sooner, and a few bad fields can muck up the average. The good news - bolls injured by stink bugs and plant bugs are not always a complete loss. Often, only one lock is affected, and even that lock may only be partially affected and harvestable.

### Farm Management Update (Chuck Danehower, Area Specialist – Farm Management)

What is the market telling us to plant for 2008? If you are thinking about planting wheat for harvest in 2008 or have forward priced some crop for 2008, you have started the planning process. As of September 4, 2007 the following cash prices for 2008 were offered in Memphis – Wheat \$5.51 bushel, Corn - \$3.60, and Soybeans - \$8.54 bushel. Cotton for December, 2008 closed at \$.7020 pound, so the cash price would probably be around \$.63 pound. We are starting to see the acreage competition for 2008 begin when the 2007 crop harvest is just starting.

In the planning process, producers should use their own estimates of yields and cost. The next decision will be whether to plant wheat. The dry weather and moisture at planting will have an impact on wheat acreage. Also consider any carryover chemicals in the ground due to lack of rainfall. Check the label on chemicals applied for any restrictions and visit with your Extension office, Extension Specialist, farm supplier, and /or consultant for any potential problems. You may want to plant wheat, but because of potential problems, wheat may not be the best crop to plant.

When planning for 2008, crop prices other than what is forward priced may be difficult to estimate. As the crops compete for acreage, there will continue to be some volatility. Based off of September 4, 2007 prices for 2008 crops, the following returns above variable are estimated. Variable expenses are from the 2007 UT Crop Budgets, adjusted for nitrogen prices. Yields used are 5 year state average yields - Wheat 55 bushels, Double Crop Soybeans 30 bushels; Corn 126 bushels; Soybeans 38 bushels; and Cotton 850 pounds.

	Per Acre			
	Wheat/Soybeans	Corn	Soybeans	Cotton
Gross Revenue	\$559	\$454	\$325	\$536
Variable Expenses	\$272	\$190	\$110	\$339
Returns Above Variable Expenses	\$287	\$264	\$215	\$197

Based on the above partial budgeting, wheat and double crop soybeans appear the most profitable, followed by corn, then soybeans and cotton. Keep in mind, this does not take into account any land costs. If you are share renting, that needs to be figured in. Most years, we are able to harvest decent double crop soybean. Don't let this year's experience with the wheat/soybean combination sour you on what can be profitable in 2008.

Make an informed decision, based again on your costs and estimated yields and prices. If we can assist you on making partial budgeting decisions or developing a whole farm plan for your operation, contact your local UT Extension office or drop me an email at [scdanehower@utk.edu](mailto:scdanehower@utk.edu).

The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color, national origin, sex religion, disability or veteran status and is an Equal Opportunity Employer. COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS. The University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating in furtherance of Acts of May 8 and June 30, 1914. Agricultural Extension Service, Charles Goan, Acting Dean.

**DISCLAIMER STATEMENT**

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label takes precedence over the recommendations found in this publication. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), The University of Tennessee, The Institute of Agriculture and the University of Tennessee Extension assume no liability resulting from the use of these recommendations.

Scott D. Stewart (editor), Extension Cotton IPM Specialist

