

IPM NEWSLETTER

Update for Field Crops and Their Pests

No. 19

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Past newsletters and other information can be found at UTCrops.com

Bookmarks: [Weed control](#) [Insect stuff](#) [Farm management](#) [Moth traps](#)

Mark your calendars for the 2009 Cotton Research Tour and Wheat Production Conference

When: September 2nd, 2009 registration from 8:00 to 8:30, Tour starts at 8:30, Wheat Production Conference starts at 1:00 pm

Where: West Tennessee Research and Education Center, Jackson

Cotton Tour - Variety Performance - Insect Management - Glyphosate Resistant Weed Management
Irrigation - Glytol + Liberty Link Cotton - Planting Date Effects on Cotton - Defoliation Programs

Wheat Production Conference - Wheat Variety Performance - Insect Control Issues - Weed Control
Basics - Agronomic Considerations - Malting Barley Discussion

Pesticide and Crop Advisor Continuing Education Units (CEU's) will be available.

Weed Control (Larry Steckel, Weed Specialist)

Glyphosate is being applied by air more this year due to very wet field conditions. Typically pilots have to be very mindful of drift on to gardens, tobacco etc. They generally have not had to be as concerned with drift onto neighboring soybean fields as most have been Roundup Ready varieties. However, we have quite a few more conventional soybeans in the state this year and drift could be more of an issue. When lining up any aerial applied glyphosate applications this summer be sure to talk to folks farming neighboring fields to see what kind of soybean variety is planted. A quick phone call could save a costly problem.

Potential issue with fomesafen. The EPA has published a draft endangered species assessment for fomesafen. Fomesafen is the active ingredient in Flexstar and Reflex. If EPA's pending draft assessment is adopted, the use of fomesafen in Tennessee would all but end. Specifically the reason for this is the proposed language that states fomesafen should have a buffer of 850' if ground applied and a 1000' buffer if air applied from non target terrestrial plants. Of course those two herbicides, Flexstar and Reflex, are key in controlling glyphosate-resistant Palmer amaranth in soybeans and cotton. The EPA is currently seeking public comments from stakeholders on the draft assessments for fomesafen. Fomesafen is the first active ingredient to be assessed under EPA's new Registration Review program, which will involve all pesticides active ingredients on a 15-year rolling cycle. Please make your opinion known. The public comment period for fomesafen is open until August 21, 2009. As of 14 days ago, there were only 3 public comments recorded.

There are two ways to make comments. They can be sent through regular mail or electronically. Comments can be mailed to the following address (reference Docket # EPA-HQ-OPP-2006-0239 in your subject line):

Office of Pesticide Program (OPP)
Regulatory Public Docket (7502P)
Environmental Protection Agency,
1200 Pennsylvania Ave., NW.
Washington, DC 20460-001.

Alternatively, comments can be made electronically using the following link:

<http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=EPA-HQ-OPP-2006-0239>

Insect Considerations (Scott Stewart, IPM Specialist)

Cotton. Tarnished plant bug and clouded plant bug numbers are starting to increase across a wider geography as the later cotton begins flowering more vigorously. All I can suggest is to scout and spray as needed. This means switching to a drop cloth and following the prescribed treatment threshold of 3.0 plant bugs per drop cloth. Alternative thresholds are 15 plant bugs per 100 sweeps or 15 or more per 100 plants. However, the drop cloth is preferred when the population is composed mostly of nymphs (which is the norm for this time of year). A lot of research has recently demonstrated that this threshold works. Don't get too excited if you are below this threshold one week and then find 5 or 6 bugs per drop cloth the next week. You have not been "ate up" in that one week. The threshold is set at a population level before yield loss occurs, thus giving a grower time to treat without risking economic damage.

Aphids are also present at low to moderate levels in some fields. The potential for aphids to impact yield is low unless plants are already under drought stress, which they are not. The best approach is probably to ignore them. Hopefully, with the high humidity and closed canopy, the aphid fungus will kick-in and control the population. There may be some opportunity to control aphids while treating for plant bugs or stink bugs. Bidrin and dimethoate will sometimes provide decent control if they have not already been used in the field. There are a number of recommended insecticides for control of aphids but in my experience Intruder (0.8 - 1.1 oz/a) and Centric (1.5 - 2.0 oz/a) have been very reliable. Carbine (2.0 - 2.8 oz) is a newer product that also provides reliable control and has an especially good fit where aphid resistance to neonicotinoids is suspected. We have not documented any aphid resistance to neonicotinoid insecticides in Tennessee. Neonicotinoid insecticides include Intruder, Centric and Trimax. Resistance has been documented just a little further south, and frankly, I've seen some "suspicious" lack of efficacy and residual in Tennessee. All these products have activity on plant bugs but use them at the higher rates and/or mix with other products.



Bollworm moth numbers in traps are still not high but they are increasing and scouts are reporting more moths and 2-8% larvae in fields. I have had several calls about yellowstriped armyworms (pictured left) in cotton including just about every kind of Bt cotton. Larvae will feed on foliage and occasionally on squares, in flowers and on small bolls. I don't think treatment is likely and there is not a treatment threshold to quote. If in doubt you can fall back on UT's fruit damage thresholds to decide if treatment is needed. These are 5% square damage and/or 2% boll damage.

Soybean. Isolated but impressive infestations of fall armyworm are occurring in some late planted soybean fields. The defoliation exceeds 90% in some cases (pictured right). Pay very close attention to fields where the canopy is not closed and especially if there is or recently has been weedy grasses in the field. In most cases the armyworms are starting on the grasses and then switching to soybeans. Mid rate pyrethroid insecticides are providing good control. Consider using Intrepid (4-5 oz/a) If rain is likely in the first 12-24 hour after application. It is more expensive but also relatively rain fast. These fields are a good example of why scouting is necessary.



Other than fall armyworm, it is still relatively quiet on the insect front. Like in cotton, I am also getting calls about yellowstriped armyworm (pictured right). It is unlikely that treatment will be necessary for this pest by itself. Corn earworms are causing real problems just to the south of Tennessee, and I've had reports of yellowstriped armyworms and/or corn earworms occurring in the same fields and causing 10-15% defoliation. Corn earworms can be a serious pest of soybeans, feeding on flowers and developing pods. Pay close attention to late planted, flowering soybeans, especially if the canopy is not closed. Treat if corn earworm populations are 9⁺ larvae per 25 sweeps. Note: this threshold was recently reduced. Pyrethroid insecticides at standard rates should provide good control, but there are other options including Larvin, Lannate, Tracer and Sevin.



Sorghum. There are several pests to watch for in sorghum. Other than sorghum midge, a caterpillar complex including corn earworm, sorghum webworm and fall armyworm are a potential problems during heading. Expect bigger problems with both sorghum midge and caterpillar pests in later maturing fields. I scout for caterpillars by shaking heads vigorously using the small white bucket (or the bottom one-half of a 5-gallon bucket). I usually shake two heads at a time. Look for larvae on 20-50 heads per field. How many heads you sample may vary depending upon pest density. Sample more if close to threshold. Treat for fall armyworm or corn earworm when there is an average of 2 or more small larvae (< 1/2 inch) or 1 large larva per head. The threshold for the smaller sorghum webworm is 3-4 larvae per head. The critical period for sampling begins at heading and for the next three weeks. Recommended insecticides for the above pests can be found on UTcrops.com at http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/InsectBook.htm.

Regional Report (Hayden E. “Gene” Miles, Area Extension Specialist, Northwest Tennessee). Adequate moisture in the area is helping crops look good and more rainfall is predicted for later this week.

Cotton growth stages being reported by private consultants, producers and IPM scouts range from bloom to boll maturing stage. All cotton being reported this week is blooming. More mature cotton plants in the Delta are averaging 14 1st positions this week and dropped from 84 percent last week to

73 percent 1st position fruit retention this week. One more mature cotton field this week planted on April 18 is showing signs of potash deficiency which can be recognized by internal chlorosis (yellowing) on older leaves which can change to a bronze color. More cotton fields are reaching physiological cutout this week (NAWF=5). Current research and demonstrations suggest that 350-450 (18-21 days) heat units (DD 60's) from the cutout date is enough time to mature yield contributing bolls beyond the point where economic losses from bollworm, tobacco budworm, plant bugs and stink bugs are likely to occur. High plant bug numbers being reported this week by IPM scouts, consultants and producers range up to 12 per 6 row feet. Also, fields are being treated for combinations of stink bugs and plant bugs this week. Bollworm/budworm damage being reported this week in Bt cotton is 1% fruit damage and 1% eggs. Private consultants are reporting 6% fruit damage (threshold - 5%) and 10 worms per 100 terminals in conventional cotton. High beneficial count this week is 10.4/6 row feet.

Soybeans: Private consultants are reporting stink bugs at 13/100 sweeps (threshold - 12/100 sweeps) in soybeans in the bloom to mid podfill growth stage. Also, one producer is reporting 50 percent defoliation from fall and beet armyworm in a 15 acre spot in a 100 acre soybean field.

Farm Management (Chuck Danehower, Area Specialist - Farm Management)

If you missed the 8th Annual Mid-South Agricultural Finance Conference on August 5, you missed another good conference. Hats off to Dr. Tom Payne and his team for putting together an outstanding day. There was a lot of very useful information discussed and I will try to hit on some of it today and in the coming weeks.

Producers are always looking for ways to measure their operation. One of the highlights of Dr. David Kohl's presentations is when he gives producers a way to financially measure their operation. The table below lists Dr. Kohl's financial metrics for the new economic realities.

<u>Measure</u>	<u>Code Red</u>	<u>Caution</u>	<u>Code Green</u>
Working Capital/Revenue	<15%	15-33%	>33%
Debt/Asset Ratio	>60%	40-60%	<40%
Credit Score	<650	650-700	700+
Op. Exp as a percent of Revenue (excluding deprec. & Interest)	>80%	70-80%	<70%
Coverage Ratio	<125%	125 – 200%	>200%

Working capital = current assets – current liabilities

Coverage ratio = Capital debt repayment capacity/term debt payment + cash required for replacement.

These are some good measures to examine your operation. Fortunately, most of these can be generated in a Finpack Finlrb whole farm plan. The University of Tennessee Extension Service Area Farm Management Specialists are experienced in constructing and evaluating your operation and these measure. It is a free and confidential service. For more information, call toll free 1-800-345-0561 or contact your local County Extension office.

Tennessee Pheromone Moth Trapping Summary - Trapping efforts are funded in large part by the Tennessee Cotton Incorporated State Support Program. Thanks to the County Extension Agents who are also running southwestern corn borer traps.

Numbers of Moths per Week (Week 14, Ending 8-5-09)

Trap Location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Trap Location	Southwestern Corn Borer
Hardeman (Bolivar)	3	16	0	Fayette (Whiteville)	0
Fayette (Whiteville)	0	7	---	Tipton (Covington)	0
Fayette (Somerville)	0	0	0	Madison (WTREC)	42
Shelby (Millington)	5	43	2	Crockett (Maury C.)	1
Tipton (Covington)	1	5	---	Obion (Midway)	35
Tipton (North)	0	58	8	Obion (Crockett)	50
Lauderdale (Goldust)	0	17	2	Obion (Union City)	39
Haywood (West)	*	*	*	Obion (Obion)	82
Haywood (Brownsville)	0	0	---	Lake (Owl Hoot)	6
Madison (WTREC)	0	53	0	Lake (Croanville)	26
Madison (North)	*	25	0	Lake (New Markham)	42
Crockett (Alamo)	7	38	0	Dyer (Newbern)	16
Crockett (Maury City)	5	106	1	Dyer (Craig Rd)	25
Dyer (Dyersburg)	0	76	0	Dyer (Hwy 104 E)	19
Dyer (Newbern)	2	33	3	Dyer (Parker Rd)	25
Lake (Ridgley)	*	*	*	Weakley (Ore Sprg.)	44
Gibson (Kenton)	0	111	7	Weakley (Greenfield)	1
Gibson (Milan REC)	7	0	0	Weakley (Bean's S.)	26
Carroll (Coleman Farm)	*	*	*	Gibson (MREC)	17
Average per Trap	2.00	37	2	Gibson (Rutherford)	29
An asterisk (*) indicates the trap was missing, knocked down, or no report was received.				Gibson (Strawberry)	*
				Giles (Tarpley Shop)	*
				Giles (Agnew)	*
				Henry (Tosh Farms)	626
				Lincoln (Molino)	8
				Lincoln (Camargo)	55
				Lincoln (Meridianvil.)	16

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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.

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