

IPM NEWSLETTER

Update for Field Crops and Their Pests

No. 13

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Cotton Crop Update (Larry Steckel, Assistant Professor)

The Tennessee Ag Statistics Service reports that 59% of the cotton is squaring compared to a five year average of 58%. Though we are behind compared to last year when 71% of the cotton was squaring, much of the late planted cotton has made up some ground in a hurry. We should start seeing blooms over the weekend or early next week for the earliest planted cotton. Hooded sprayers and wheel rigs continue to run, and I would suspect most folks would like to have much of the cotton planted from April through early May “laid by” by next week.

DD-60 Accumulation (TASS and NWS data)

<u>Location</u>	<u>4/17/06- 6/11/06</u>	<u>4/23/06- 6/11/06</u>	<u>5/1/06- 6/11/06</u>	<u>5/8/06- 6/11/06</u>	<u>5/15/06 6/11/06</u>	<u>5/22/06 6/11/06</u>	<u>5/28/06 6/11/06</u>
Ames Plantation	829	742	703	654	632	594	469
Brownsville	881	794	750	701	674	624	498
Covington	808	729	696	652	630	583	460
Dyersburg	901	815	770	718	696	640	515
Huntingdon	742	667	626	592	577	548	443
Jackson	810	730	687	643	621	581	467
Memphis	921	825	784	726	698	652	511
Milan	757	683	646	607	591	554	443

Cotton Weed Control (Larry Steckel)

The most asked weed control questions of the week have been on hophornbeam copperleaf and prickly sida (teaweed). These two weeds typically germinate in mid-June through August. Herbicides commonly used over the top or post direct at this time (glyphosate, Envoke and Staple) are typically not too effective on these two species. The best control measure is to add Aim or Valor in with glyphosate post direct and/or bump up the rate of glyphosate.

The good wheat yields coupled with great market prices have some considering planting wheat behind cotton this fall. Please keep in mind there are just a few commonly used layby herbicides that have a recrop interval short enough where sowing wheat this fall would still be on label. The herbicides are glyphosate (anytime), Aim (anytime), Envoke (3 months), Ignite (70 days), Suprend (3 months) and Valor (30 days). Two of these herbicides, Envoke and Suprend, come in just under the wire as most growers like to have their wheat planted by early October. Listed below are the wheat recrop intervals for most of the popular layby herbicides.

Herbicide

Aim
Caparol
Cotoran
Direx
Dual Magnum
Envoke
Glyphosate
Goal
Ignite
Layby Pro (Diuron + Linuron)
Staple
Suprend (Envoke + Caparol)
Valor

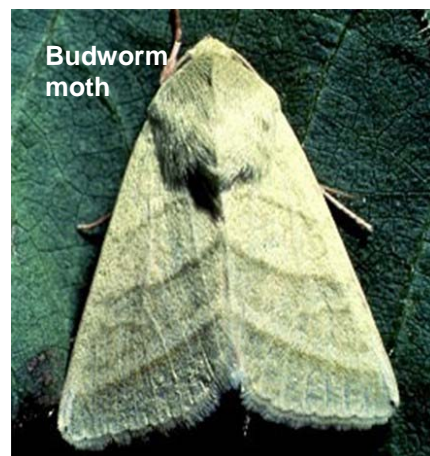
Wheat Recrop

anytime
no fall recrop (wheat grown for grain)
6 months
1 year
4.5 months
3 months
anytime
10 months
70 days
4 months
4 months
3 months
30 days

Insect Issues (Scott Stewart, IPM Specialist)

Cotton: The phone is quieter this week. Most of the calls continue to concern tarnished plant bugs, although more clouded plant bugs are also being found in the mix. I've been to, and had reports from, many areas of West Tennessee. Plant bug infestations are still highly sporadic. I covered a lot of topics dealing with plant bug control in the last few newsletters, so I am not going to elaborate much here. If you've seen the recent Delta Farm Press article about insecticide resistance in tarnished plant bug populations, you will understand why UT recommendations discourage the use of pyrethroid and OP insecticides between first square and first bloom. OP insecticides include Orthene, Bidrin, Lorsban, and dimethoate. Pyrethroid insecticides include Ammo, Karate, Baythroid, Asana, Mustang Max, Capture or Brigade, and Prolex. The intent is to rotate insecticide classes; saving the pyrethroid and OP insecticides for later in the year. The goal is to manage insecticide resistance, not only for these insecticides, but also for other insecticide classes. The classes to which other commonly used insecticides belong are listed in the back of the [Cotton Insect Control Guide](#).

There have been a few scattered reports of budworm/bollworm eggs (and larvae) in non-Bt cotton. The moth traps are not giving any big hints (see appended table), but tobacco budworm catches are more persistent this year than in the previous 2-3 years. Based on trap catches and indications to our south, it is best to assume any "worm" infestations in non-Bt cotton have at least some tobacco budworms in the mix. Actually, at this time of year, tobacco budworms are often more common than bollworms in non-Bt cotton. The economic threshold for bollworm/budworm in non-Bt, pre-blooming cotton is 8⁺ small larvae per 100 plants. There is a high risk that pyrethroid applications will fail to control tobacco budworm. Better options include Denim (8 -12 oz), Steward (11.3 oz), and Tracer (1.5 - 2.5 oz). Orthene (1 lb), Larvin (24-36 oz), Lannate (24 oz) and Curacron (12-16 oz) are second tier insecticides for bollworm and tobacco budworm but offer at least some plant bug control. Of course, Orthene or acephate should provide excellent plant bug control. You may also consider various tank mixes including a premix called DoubleThreat (= Capture + Tracer). It is very unlikely that Bt cotton varieties (Bollgard, Bollgard II or WideStrike) will require treatment for bollworm prior to bloom. Of course, Bt cotton is essentially immune to tobacco budworm.



The assessment for boll weevil eradication was recently set by the board of the Tennessee Boll Weevil Eradication Foundation. The 2006 assessment will be \$10 per acre, identical to last year. This assessment is for all cotton acres grown in West Tennessee.

General Comments: I continue to get a smattering of calls about snails (with shells), not slugs (which lack shells). Unlike slugs, snails will not causing any meaningful injury to cotton or beans. In fact, with one exception where there was some minor leaf etching, I have not seen any evidence that they even feed on the plants. This is a good thing, because controlling snails with pesticides is not easy or economical.



Cotton aphids remain hard to find in almost all the cotton fields. There continue to be reports of green stink bugs in prebloom cotton and soybeans, and overall, there appears to be a fair number of stink bugs around this year. Pay special attention to the earliest beans and cotton in an area. They will be highly attractive to stink bugs once they begin to bloom.

New insecticide labels:

- Trimax Pro 4.44 Supplemental Label -- allows higher use rate up to 1.8 oz/a in single application.
- Intrepid 2F -- Soybean label for control of most caterpillar pests (4-8 oz/a).
- Zephyr 0.15E -- 24(c) label approved for control of spider mites in cotton (expires 12/31/06).

Corn: A few second generation southwestern corn borers (SWCB) are being caught in moth traps. Expect a big jump in trap catches by next week and even bigger the week after. It has been my experience that eggs and larvae of SWCB will not be readily found in corn until at least 7-10 days after moths are first caught in traps. Watch out during the week of July 10, and concentrate your scouting exclusively in non-Bt corn fields.

Area Cotton Report for Northwest Tennessee (Gene Miles, Area Crop Specialist, Week of 6/26)

Cotton and other row crops have had good growing conditions this week. Cotton blooms (red and white) have been observed in cotton planted April 12 in the delta area of Dyer County. All cotton fields being observed are squaring this week. More mature plants in the area are 29 inches tall, have fourteen nodes with twenty-two total fruiting positions. Square retention this week ranged from 76 to 99 percent. Plant bug populations ranged up to 2.0 per 6 row feet and/or 16/100 sweeps. Stinkbug numbers ranged from 0 to 1.6 per 6 row feet. Grasshoppers and bean leaf beetles (foliage feeders) have been observed in fields causing minor damage (1-5% defoliation). Beneficial counts ranged up to 7.0 per 6 row feet.

Phytophthora Root Rot has been observed in several varieties of soybeans in Dyer County. Symptoms include yellowing between veins and along margins of lower leaves. Affected plants usually occur in groups in a row rather than singly. Stinkbug numbers being observed this week range up to 0.8 per 3 row feet in group III soybeans. The threshold is considered to be 1 per 3 row feet in soybeans during bloom up to mid-podfill.

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

What does it cost to spray for plant bugs at this stage of production? In the last issue, Dr. Stewart compared the rates of a couple of the plant bug sprays. Putting a cost per acre to those sprays can give you an idea on how they will affect your cotton budget. Of the insecticides listed in the 2006 Cotton Insect Control Guide, I could only get prices for three different materials, Trimax Pro, Centric, and Carbine (not necessarily available, but a price was listed) that are primarily recommended at this stage of cotton. The prices I have may be old by now -- as we know they are subject to change during the season.

Insecticide	Cost/Oz	Broadcast Rate	Cost/acre	Banded Rate(50%)	Banded Cost
Trimax Pro	\$4.03	1.35 oz/acre	\$5.44	0.675 oz/acre	\$2.72
Centric	\$3.60	2.0 oz/acre	\$7.20	1.00 oz/acre	\$3.60
Carbine	\$3.66	2.6 oz/acre	\$9.51	1.30 oz/acre	\$4.76

Using these chemicals and rates gives us a range of cost between \$5.44 and \$9.51 per acre for broadcast rates and \$2.72 and \$4.76 acre for 50% banded rates. Of course, there is an application cost and that can vary from the \$2.21 acre for owned equipment (UT Crop Budgets – individual cost will vary) to around \$5.00 for custom application. Using the \$5.00 acre custom application cost and the minimum cost for broadcast rates is \$10.44. The UT Crop Budgets have a cost of \$5.00 acre for a banded application using a hooded sprayer, making the minimum cost for banding at \$7.72 acre. Whichever rate, material, or method you use will generate a cost that will affect your budget/cash flow, so make sure it is **needed**. Automatic spraying can be costly.

Soybean Phytophthora Root and Stem Rot (Melvin Newman, Extension Plant Pathologist)

Several samples and calls have been received concerning dead and dying soybeans in the last few days. The main cause was found to be Phytophthora root and stem rot caused by the fungus *Phytophthora sojae*. This disease can occur at any stage of growth, but it seems to be causing most damage this season at the late seedling stage up to the blooming stage. Flooding or continuous wet, rainy weather provides the conditions necessary for disease development. Under these conditions this fungus can attack the roots quickly and cause the soybean leaves to turn yellow and brown causing death of the entire plant. The roots are rotted and many times the lower stems turn dark brown on diseased plants.

Little is known in TN about variety resistance, since we usually don't have very much of this problem. In some cases replanting may be necessary, but be sure to advise the use of a fungicide seed treatment with "Apron" or metalaxyl in combination with other fungicides. However, seed treatments are not expected to completely prevent the occurrence of this disease, but may help prevent some seed rots from occurring. This disease may be more severe in no-till because the soil



can absorb more rainfall providing moisture for this fungus. Improving drainage and crop rotation may help in many cases.

The pictures above were taken Monday in Weakley County and show symptoms of Phytophthora. The chart below shows suggested seed treatment fungicides containing metalaxyl. (PS., Mefenoxam is very similar to metalaxyl and gives about the amount of control).

Examples of Fungicide Seed Treatments

Active Ingredient	Trade names (company)
Azoxystrobin + <i>metalaxyl</i>	SoyGard (Gustafson LLC)
Carboxin + PCNB + <i>metalaxyl</i>	Prevail (Trace Chemicals LLC)
Carboxin + thiram + <i>metalaxyl</i>	Stiletto (Trace Chemicals LLC), Stiletto-Moly (Trace Chemicals)
Chloroneb + <i>metalaxyl</i>	Delta-Coat AD (Agrilience), Nu-Flow AD (Wilbur-Ellis)
<i>Mefenoxam</i> + fludioxonil	ApronMAXX RTA (Syngenta), ApronMAXX RTA + Moly (Syn.)
PCNB + <i>metalaxyl</i> + <i>Bacillus subtilis</i> GB03	System 3 Seed Treatment (Helena)
Thiram + <i>metalaxyl</i>	Protector-L-Allegiance (Trace Chemicals LLC)

Tennessee Pheromone Moth Trapping Summary - Trapping efforts are funded in large part by the Tennessee Cotton Incorporated State Support Program.

Numbers of Moths per Week (Week 9, ending 6-28-06)

Trap location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Southwest. Corn Borer
Hardeman (Bolivar)	0	0	0	---
Fayette (Whiteville)	0	0	0	---
Fayette (Somerville)	1	2	---	0
Shelby (Millington)	13	19	0	---
Tipton (Covington)	2	1	21	---
Tipton (West)	0	1	---	3
Haywood (West)	0	0	0	---
Haywood (Brownsville)	0	4	---	---
Madison (Exp. Stn.)	8	4	0	6
Madison (North)	2	4	---	---
Crockett (Alamo)	0	0	0	---
Crockett (Maury City)	2	7	---	---
Dyer (Dyersburg)	2	4	0	---
Dyer (Newbern)	3	5	---	8
Lake (Ridgley)	1	0	0	---
Gibson (Kenton)	4	15	---	---
Gibson (Milan Exp Stn.)	3	2	0	0
Carroll (West)	0	0	0	---
Lauderdale (Goldust)	*	*	0	---

An asterisk (*) indicates trap was missing, knocked down or not run.

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