

IPM NEWSLETTER

Update for Field Crops and Their Pests

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Cotton Crop Update (Larry Steckel, Assistant Professor)

The Tennessee Ag-Statistics Service reports that 81% of the cotton is squaring and 6% is setting bolls. Most of the cotton planted in that early window this spring from mid-April until early-May is flowering. The cotton crop for the most part in West-Tennessee is in pretty fair shape, and the rain July 5th (for areas that got it) should help keep it going. Much of the cotton in Middle Tennessee had to be replanted in late May and had not received any rain until this week. The rain should help kick that cotton into gear as well. Though there are some exceptions, our crop is in much better shape than much of the cotton crop south of us where there has been little or no rain since planting. Judging by my phone calls and travel through West and Middle Tennessee, most of the early planted cotton is laid by and many will be trying to finish spraying for weeds in the late planted cotton over the next week or two.

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	948	861	822	773	751	713	588
Brownsville	1010	923	879	830	803	753	627
Covington	928	849	816	772	750	703	580
Dyersburg	1037	951	906	854	832	776	651
Huntingdon	862	787	746	712	697	668	563
Jackson	932	852	809	765	743	703	589
Memphis	1046	950	909	851	823	777	636
Milan	875	801	764	725	462	672	561

Cotton Weed Control (Larry Steckel)

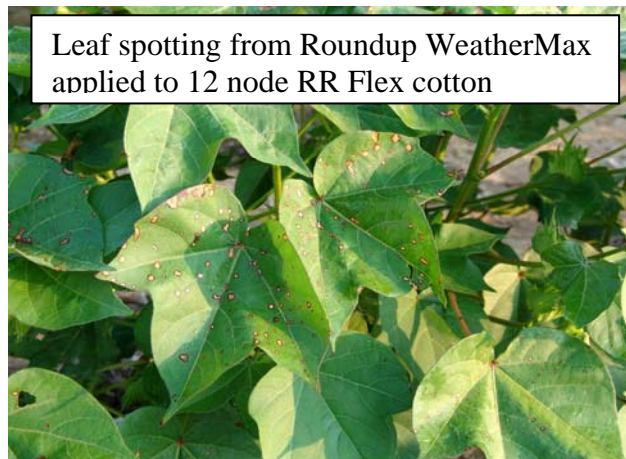
Reflex just received a new label this week. It can now be applied to cotton hooded or post-directed. Though it is too late for this year it can now also be applied pre plant to cotton. The labeled rate post-directed is 1 to 1.5 pts/A along with 0.25 to 0.5% v/v of NIS. It can be tank mixed with a number of commonly used herbicides for post-direct applications including glyphosate. As far as application instructions Reflex, a diphenylether like Valor or Aim, will readily burn any green tissue it contacts. Take special care to keep the spray directed



away from green stems or leaves. The label recommends that Reflex applied post-direct should be on cotton that has a minimum of 4" of bark. Reflex, similar to Aim or Valor, will provide good contact control of pigweeds and morningglories. It will also provide excellent residual control of pigweeds similar to Valor. The wheat recrop after a Reflex application is 4 months.

The recommendation on all the labels of herbicides that can be post-directed is to keep it off the cotton. As any one knows who has done any post-directing, that is much easier said than done. Invariably some will get on the lower leaves and stems. Typically those very lowest leaves do not contribute much to the plant as far as filling bolls so loss of lint in most cases will not occur. However, sloppy applications that move up higher on the plant can and will hurt yield.

There has been some minor (2 to 10%) leaf spotting from 5+ node Roundup WeatherMax or Roundup Original Max applications on Roundup Ready Flex cotton. As we have seen pretty much all year our cotton crop has been more prone to surfactant burn than what we typically are used too. We saw it earlier this year with glyphosate tank mixes with either Dual or dimethoate over the top of young cotton, and now we are seeing it in a few cases on applications to >10 node cotton. As with the earlier spotting the level of leaf injury is minor and should not cause yield loss.



Insect Issues (Scott Stewart, IPM Specialist)

Cotton: Calls about plant bugs have diminished, partly because a lot of cotton was sprayed in the last 7-14 days. I've heard good reports about the performance of both Trimax Pro and Centric provided high enough rates were applied, and these rates were also providing decent control of stink bugs which were also present in some fields. However, do not expect pre-bloom applications to impact stink bugs that migrate into fields once blooming begins.

As mentioned above, stink bugs are present in some fields. As cotton begins to set bolls, it is time to really pay attention for stink bugs. Also, it will be time to switch insecticides. Bidrin (5-8 oz), acephate (0.5 - 0.8 lb), and Vydate (11-12 oz) will provide good control of plant bugs and stink bugs, including brown stink bugs. The pyrethroid insecticides will also provide excellent control of green stink bugs. Consider using a pyrethroid tank-mixed with the above products when tarnished plant bugs are also present in fairly high numbers. Diamond 0.83 EC (9-12 oz/a) was added to UT's list of recommended insecticides for plant bugs. It represents a new mode of action for plant bug control, but we need to be aware of several things about this product. First, it does not control adults, so its primary fit will be in blooming cotton when nymphs compose the majority of the plant bug population (and as a potential tank mix partner). Second, it is relatively expensive and works best when multiple applications are made. Of course, most insecticides work better when applied multiple times (assuming pests are present). Finally, this product has some activity on stink bugs and caterpillar pests, although I would characterize this as "suppression" (and mild suppression of bollworm and tobacco budworm). Frankly, we have not figured out how to best to use Diamond, but you may want to experiment with it on a limited basis. It seems to have a bigger role in Delta environments, especially where pyrethroid and acephate resistance is bigger a problem.

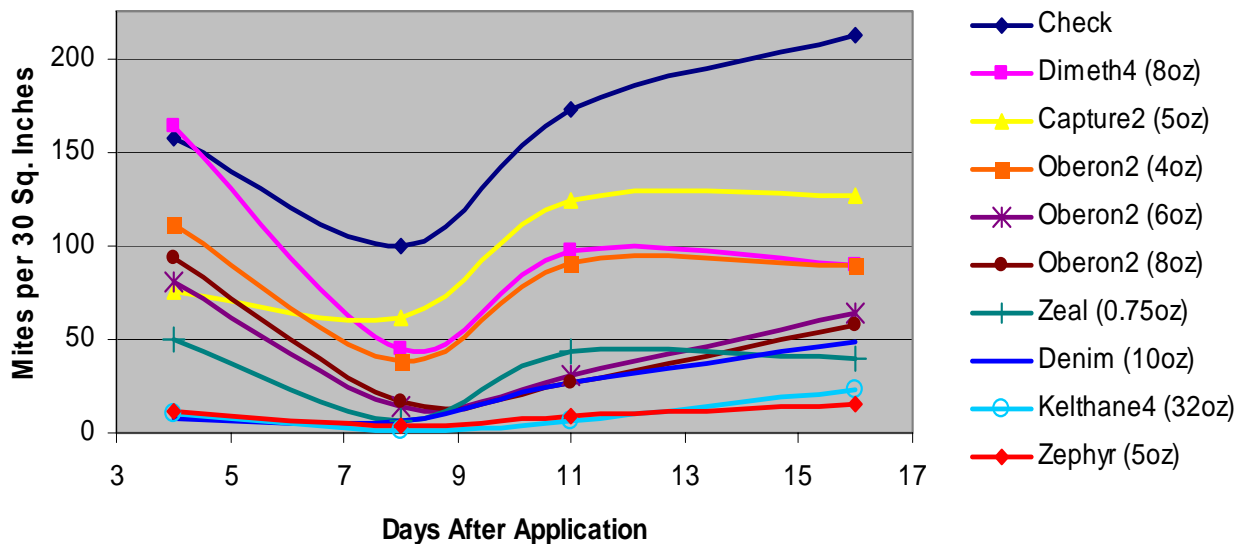
Tobacco budworm and/or bollworm reports are coming in pretty steady on non-Bt cotton. I've had several calls about 2-8% larvae and/or eggs in Madison, Haywood, and Fayette counties. I have been encouraging some to hold off when the cotton is not blooming unless there are 8⁺ worms per 100 plants. However, a more aggressive approach is recommended where the cotton is blooming, and the recommended threshold is 4⁺ larvae per 100 plants. Based on moth traps and what is being seen in the field, it appears tobacco budworms are in the majority. I dissected out mandibles from larvae collected in Madison County, and the larvae were tobacco budworm. Thus, it will be more expensive to treat these non-Bt fields. Because of this, you might consider letting infestations of <6% ride until the cotton really begins to flower. There are a bunch of tobacco budworm insecticide options, none of which are necessarily inexpensive. The following link has a table of recommended products. DoubleThreat (a premix of Tracer and Capture) is no longer manufactured, but some carry-over stock may be available.

Tobacco Budworm Insecticide Recommendations:

http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/pubs/Cotton_Insect_Control_PB387.pdf

Granulated cutworms are adding confusion. Eggs are still being found in parts of the state (Madison, Haywood, Hardeman and Fayette counties). The eggs are similar to bollworm eggs but are slightly larger, a little more flattened at the base, and often there are several eggs clustered on a leaf or terminal. Unlike bollworms and budworms, the small larvae have a dark head capsule and are covered with fine hairs, but you will need good eyes or a hand lens. They will cause minimal damage.

Spider mites are showing up, including several calls from Gibson and Carroll counties. Kelthane 4E at 32 oz/acre is my number one choice but is in short supply. Dicofol 4E, a generic equivalent, may be available. I've included some data from an early-season test in Carroll County last year, but it closely resembles data being collected this year as well. As you can see, there were several miticides besides Kelthane that performed pretty well including Denim, Zephyr, Zeal and Oberon. Note that the Oberon tested in this study was a 2-pound formulation. The Oberon being sold now is a 4-pound product. The *minimum* use rate of Oberon 4F is 4 oz/acre. Unfortunately, all these choices will be more expensive than Kelthane. Capture and dimethoate did poorly, and data from the Midsouth are similar this year.



Aphids continue to cause problems in much of Mississippi, Arkansas, and Louisiana. Populations in Tennessee remain low. There are indications that cotton aphids to the south of Tennessee are developing resistance to the neonicotinoid insecticides such as Trimax, Centric and Intruder. Preliminary screening indicates that aphids from previously treated fields, where populations have bounced back, are resistant. Please report any problems you may have with aphid control.

Soybean: Stink bug populations should be sampled in any fields that are flowering and setting pods. Prior to R6, the recommended treatment threshold is an average of 3⁺ stink bugs per 25 sweeps. Research indicates that this threshold is, if anything, too aggressive. After R6, the threshold increases to 9/25 sweeps. Many states use this higher threshold for the entire season.



Grasshopper calls have trickled in more commonly this year than most, almost exclusively in soybean. The biggest threat is to small plants, and sometimes only to field edges. There are several insecticide options, but my experience is that acephate 90 (Orthene) at 0.5 lbs/acre and Dimilin 2L at 2 oz/acre are excellent choices. Dimilin is best used only where most grasshoppers are immature, but I've seen excellent results with rates as low as 1-1.5 oz/acre (although this is lower than the labeled rate). Several pyrethroids, Lorsban and Furadan are also on UT's recommended insecticide list.

Corn: Southwestern corn borer (SWCB) moth catches, as expected, rose this week, especially in the northwest part of West Tennessee where first generation moth catches were high. Expect a big peak in moth activity during the next 2-3 weeks in much of Dyer, Obion, Gibson and Weakley Counties (and maybe elsewhere). As I've indicated several times before, the moths will be most attracted to later fields, and these fields will also be most susceptible. Considering the size of the moth flights so far, it is a "no brainer" that many of our later non-Bt fields in the above areas will benefit from an insecticide application sometime during the next two weeks (but probably not starting until next week). Eggs of SWCB (2-8) and European corn borers (10-25) are overlapped in a fish-scale pattern. They are usually laid on the ear leaf or the leaf immediately above or below the ear. Small larvae will often feed behind the leaf collars or between the ear husks. Aerial applications will be required in almost all cases. Do not expect insecticides to control more than 70-80% of the larvae present. The pyrethroid insecticides are a good option. Another good option is Intrepid 2F at 4-6 oz/acre. In some cases, more than one application may be justified, but you won't know unless the fields are checked. Scouting should be concentrated in non-Bt fields that are relatively late.



[Area Cotton Report for Northwest Tennessee \(Gene Miles, Area Crop Specialist, Week of 7/03\)](#)

Cotton: Signs of dry weather are being noted in cotton fields this week with wilted plants occurring especially in sandy, droughty areas of fields. Hopefully the occurring and expected showers and cooler temperatures will help correct the dry conditions. Square retention reported this week ranged

from 78 to 100 percent. Square retention from first square to first bloom should be 80 percent or higher. Plant bug numbers ranged up to 1.0 per 6 row feet and/or 15/100 sweeps this week. Light infestations of spider mites were observed this week. Spider mites are found on the underside of leaves. Reddish or yellow speckling of leaves indicate spider mite activity. The treatment threshold is considered to be when 30-50 percent of plants are affected and mites are still present. Light infestations of aphids have also been reported this week. Two percent infestations of bollworm/tobacco budworms have been found in conventional cotton. Stink bug numbers this week range up to 1.4 per 6 row feet. The high beneficial count reported this week was 8.0 per 6 row feet.

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

The planted acreage report was released June 30 and estimated crop acreages and expected changes from last year for Tennessee are as follows: Cotton, 700,000 acres, up 60,000 (highest since 1995); Soybeans, 1.12 million acres, down 10,000; and Corn, 600,000 acres, down 50,000. Nationwide, Cotton, 15.276 million acres, up 1.03 million acres; Soybeans, 74.9 million acres, up 2.788 million acres; and Corn, 79.366 million acres, down 2.393 million acres. Interestingly enough, Cotton is up 650,000 acres over the March estimate, Soybeans, down 1.97 million acres from March and Corn, up 1.34 million acres over the March estimate.

The report was somewhat bearish for cotton prices, although dry weather in Texas will most likely result in high acreage abandonment. The world supply & demand will drive the cotton market, with some analyst predicting a better cotton market in 2007. The soybean market has responded favorably since the report with November soybeans trading around \$6.27 bu. A dry weather scare in the Midwest will be needed to push soybeans much higher. Consider pricing up to 50% at this level and more if a dry weather scare pushes the market to \$6.50. There will be a large supply of soybeans this fall. Don't forget to look at the 07 and 08 markets with soybeans at \$6.59 for 07 and \$6.75 for 08. Historically, those are good prices. The corn market with acreage down has the greatest upside potential of the markets. Particularly, if there is a weather scare. However, with September at \$2.53 bu., consider pricing up to 25% - 50% of your crop at this level. With good weather and good corn yields, the market could still drop to loan rates. As in soybeans, look to 07 & 08 to price some of your corn crop for those years. Currently, Sep 07 Corn is \$3.00 bu. with Sep 08 at \$3.25. Lastly, if you plan on raising wheat in 2007 or 2008, the wheat market is very attractive at \$4.53 bu. for 07 and \$4.72 bu. for 08. Consider locking in those prices for at least part of the crop. For weekly updates on marketing, go to Dr. Delton Gerloff's website at <http://web.utk.edu/%7EQuince/>. If I can assist you with your marketing plan, please give me a call at 731-635-9551 or email at scdanehower@utk.edu.

Boll Weevil Eradication Update (Dr. Ron Seward, Tennessee Program Manager)

Trapping and capture information is included for the period June 22 – 28 (cycle 11). A total of 732 boll weevils were trapped. This is a 39% increase from last week and a 35% decrease from this cycle last year. Ninety-five percent of the capture was from Shelby-Tipton counties. The percent of fields with zero weevil captures ranged from 88% in Brighton work unit to 98% in both Brownsville and Dyersburg. Year to date capture is down 56% from 2005. Approximately 5000 acres were treated this cycle.

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 10, ending 7-6-06)

Trap location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Southwest. Corn Borer
Hardeman (Bolivar)	0	0	0	---
Fayette (Whiteville)	0	0	0	---
Fayette (Somerville)	0	1	---	0
Shelby (Millington)	14	20	0	---
Tipton (Covington)	1	2	15	---
Tipton (West)	0	2	---	2
Haywood (West)	0	0	0	---
Haywood (Brownsville)	1	2	---	---
Madison (Exp. Stn.)	5	3	0	10
Madison (North)	4	0	---	---
Crockett (Alamo)	1	3	0	---
Crockett (Maury City)	7	0	---	---
Dyer (Dyersburg)	3	5	0	---
Dyer (Newbern)	2	7	---	100
Lake (Ridgley)	1	4	0	---
Gibson (Kenton)	0	12	---	---
Gibson (Milan Exp Stn.)	0	1	0	17
Carroll (West)	0	1	0	---
Lauderdale (Goldust)	6	4	0	---

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

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