

IPM NEWSLETTER

Update for Field Crops and Their Pests

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Cotton Situation and Outlook (Chris Main, Extension Cotton and Small Grains Specialist)

Many thanks to those of you who attended the 25th Milan No-Till Field Day this week. We hope that you were able to increase your knowledge about crop production.

The Tennessee Agricultural Statistics Service reports cotton condition as 10% excellent, 62% good, 23% fair, and 4% poor. 96% of the crop is squaring compared to 82% last week, 98% last year and 97% for the five year average. 46% of the crop is setting bolls compared to 14% last week, 64% last year and 52% for the five year average.

It is very obvious that many cotton fields in west TN are suffering from a lack of water. Most fields are not lapping the row middles and are at NAWF 4 or less. Boll and square retention in most fields I have observed is 90% or greater. Rainfall is still needed to fill bolls and help prevent physiological fruit shed. Most of our yield potential will be set in the next two weeks.

DD60 Accumulation (TASS and NWS data)

Location	4/20- 7/24	4/27- 7/24	5/4- 7/24	5/11- 7/24	5/18- 7/24	5/25- 7/24	6/1- 7/24
Dyersburg	1375	1330	1308	1271	1251	1172	1060
Fayetteville	1395	1338	1307	1253	1235	1155	1049
Jackson	1299	1252	1230	1187	1166	1098	993
Memphis	1562	1493	1467	1408	1372	1276	1150

Insect Management (Scott Stewart, IPM Specialist).

Cotton: We are seeing a little bit of everything except the bollworm flight has not yet begun to any great extent. In fact, we are currently catching more tobacco budworm moths than bollworm across West Tennessee, but anticipate that changing next week. Threshold levels of plant bugs and stink bugs are present in some fields. Get the drop cloths out and start checking for plant bugs and stink bugs in blooming cotton. It appears we will have at least an average bug year (and certainly more bug problems than last year). *Reminder:* the treatment threshold for tarnished plant bugs is 3-4 insects per drop cloth. Count clouded plant bugs as equivalent to 1.5 tarnished plant bugs. We've also been testing a threshold where one stink bug is counted as equivalent to three tarnished plant bugs. This approach appears to work well when dealing with a mixture of plant bugs and stink bugs.

It is not too surprising with all the early spraying for plant bugs that we are now seeing more aphids than usual (pictured right). Few fields currently require treatment. The neonicotinoid insecticides (e.g., Centric, Intruder and Trimax Pro) and Carbine are the best choices for controlling aphids. Of these, Intruder (0.6-0.8 oz/acre) is usually the best aphid product. You can use relatively low rates of the above products, but standard rates will be needed if also targeting plant bugs. You will sometimes get adequate control with Bidrin or Dimethoate, especially if they have not already been used in the same field, but do not be surprised if they don't provide satisfactory control.



Spider mites are prevalent in some fields. In a test rated Tuesday in Crockett County, bifenthrin (e.g., Brigade, Discipline, Fanfare, etc.) gave about 80% control of spider mites after three days when applied at a rate of 5 oz/acre. We often see bifenthrin work reasonably well about this time of year. Being able to use bifenthrin for spider mite control is helpful when other pests such as plant bugs, stink bugs and bollworms are present. A couple of things to keep in mind: 1) bifenthrin may not work well if you have been using it already, 2) the true miticides such as Dicofol, Comite II, Zephyr, Oberon, Zeal, etc. will not always provide better control than bifenthrin but they will be more consistent, 3) the true miticides have little or no activity on pests other than spider mites, and 4) you are more likely to need a follow-up application if using bifenthrin. In short, use a true miticide if spider mite infestations are severe or they are the primary target pest in the field.



A few reports about fall armyworm have come in, and some of my colleagues to the south have mentioned some heavy pressure in cotton. Fall armyworms can sneak up on you, and they can be a potential problem in non-Bt, Bollgard and even Bollgard II cotton. WideStrike is less likely to have treatable infestations of fall armyworm. The treatment threshold for fall armyworm is when four or more larvae are found per 100 blooms and bolls; or when 10-20 larvae are found per 100 plants. Do not count small larvae (< 1/4 inch) on Bollgard II and WideStrike; give the technology a chance to work. Besides feeding in flowers and in and under pink bloom tags, small larvae will also be found feeding behind the bracts of bolls (boll scarring pictured above). Diamond (6 oz/acre) is a preferred treatment. Experience has also shown that pyrethroid insecticides tank mixed with 4 oz of Diamond does a good job at controlling fall armyworms, and the mix is a decent choice for plant bugs, stink bugs and bollworms that may also be present.



Soybean: Stink bugs are beginning to show up at treatment levels in some soybean fields. Populations are running close to threshold in most cases. The treatment threshold is 12 stink bugs per 100 sweeps between R1 and R5.5. However, consider delaying treatment for stink bugs if populations are just a little above threshold and pods are not visible (R1-R2).

Delaying the insecticide application will give you an opportunity to piggyback a fungicide application with the insecticide. Near threshold populations will cause little or no economic damage to fields unless pods are present (R3), and the threshold mentioned above is already plenty aggressive. *Remember:* The stink bug threshold increases to 36/100 sweeps after mid pod fill (R5.5).

Soybean fields should be checked every 7-10 days with a sweep net (take a minimum of four sets of 25 sweeps per field). There can be a big difference in pest numbers between fields depending upon planting data and maturity group. Watch blooming soybeans for corn earworm (bollworm) once the moth flight begins. Pod feeding is the primary concern, and the fields at greatest risk are those where the canopy is not closed. The suggested treatment threshold is 10-15 larvae per 25 sweeps. Synthetic pyrethroids at medium rates should provide excellent control.



I'm getting calls about Dectes stem borer (pictured right). Adults have been and will continue to emerge over the next several weeks. UT has not traditionally recommend treatment for this insect, and recent data supports this position. Until we have data saying otherwise, I suggest ignoring them.

Corn: Hopefully, most of the spraying for southwestern corn borers (SWCB) in non-Bt corn has already occurred. A second insecticide application about 10-14 days after the initial application may be justified in heavy pressure scenarios or on late corn. Intrepid at 4-6 oz/acre is the preferred treatment for SWCB once tasseling has begun. A lot of folks included a pyrethroid insecticide with their fungicide application at first tassel, even on Bt corn. Frankly, I am not sure what they were spraying for (and neither were they). I hope those with non-Bt corn waited for the SWCB moth flight (which was well after first tassel for most fields).

Area Cotton Report for Northwest Tennessee (Gene Miles, Area Crop Specialist).

Cotton: Parts of the area are receiving much needed rain this week. Hopefully, this will continue and relieve the hot dry conditions. All cotton fields being monitored through the Dyer and Lauderdale county IPM programs are blooming. Large, more mature plants monitored this week averaged 41" inches tall, had 17 nodes with 11 visible 1st position fruiting positions, and averaged 81 percent 1st position fruit retention. Plant bug numbers ranged up to 2.9 per 6 row feet and/or 16/100 sweeps. One field being monitored through the Lauderdale County IPM program has reached the threshold due to a combination of tarnished plant bugs and stink bugs. After first bloom, 3 tarnished plant bugs should be considered as having the same damaging effect as 1 stink bug or vice versa. Bollworm/tobacco budworm damage is very light this week. When checking for percent damage in Bt and conventional cotton, 100 fruiting bodies (squares, blooms and bolls) should be observed from top, middle and lower areas of the plant per 20 to 40 acres. Also, number of bollworm/tobacco budworms should be determined by looking in squares in the top twelve inches of the plant (terminals) in 100 plants per field. When checking Bt cotton, larvae less than 1/4 inch should not be counted in determining larvae per 100 plants because they have not had time to ingest a toxic dose of Bt toxin. Beneficial counts ranged up to 10.2 per 6 row feet this week.

Soybean: Stink bug numbers were up to 0.4 per 3 row feet this week in Group IV soybeans. Also, stink bug eggs (barrel shaped) were observed this week. Defoliation ranged from 0-5%.

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

I attended the Decisions '08 seminar sponsored by Brock Associates. Some of the highlights and information presented follow. Drew Learner of World Weather Inc. indicated that it looks like we will be dry late summer stressing late season crops and possibly reducing yields. The Eastern Midwest and Southeastern States will produce favorable summer crops yields. The Mid South is forecast to be near normal for frost and freeze potential this fall, the Mideast will be later than usual and the Southeast will be a little earlier than usual.

There will be some new biotechnology coming in the future as the first generation is phased out. The first generation in cotton will be phased out by 2011 as the second generation is fully in place. In soybeans, the second generation of varieties will be available in Group 3 and lower in 2009. There will be a 3-5 year time horizon for full conversion to the second generation in soybean varieties.

Commodity prices in 2008 have been about the money flow according to Richard Brock. As money flowed into the commodity market, prices went up. Within the last week or so, the oil and energy market have gone down with the grain and soybean market following. As oil has gone down, energy index funds which also hold grain and soybeans positions have had to rebalance their funds causing them to sell grain and soybeans. This has driven the market down rather than fundamental supply and demand factors. Brock commented that prices may have actually factored in the fundamental supply and demand numbers. He sees weakness in the short term market unless the money flow changes or weather problems that affect crop yields.

Reminder - 7th Annual Mid-South Agricultural Finance Conference on **August 6**. It will be held at the University Center, UT Martin, starting at 8 a.m. and adjourning at 3 p.m. Featured speakers are Dr. David Kohl, Dr. Matt Roberts, and Robert Egerton. Dr. Kohl will be addressing effective management practices, risk factors to look for, and how to protect, strengthen your balance sheet and reduce risk. Dr. Roberts, who also spoke at this year's Grain Conference, will look at the future of commodity prices and land values. Matt will focus on the opportunities and threats for crop and livestock producers and lenders. Mr. Egerton, who is president of the Eastern Region Commercial Agribusiness Division for Cobank, will address the availability and cost of agricultural loans in 2009. More information on this very educational conference can be found at <http://www.utm.edu/staff/banking/agconference/> or by calling 731-881-7324 or emailing Dr. Tom Payne at tpayne@utm.edu. The registration fee for producers is \$75.

Tennessee Pheromone Moth Trapping Summary - Trapping efforts are funded in large part by the Tennessee Cotton Incorporated State Support Program. Some County Extension Agents are also reporting additional trap counts for SWCB moths at corn variety test locations. Thanks to them and Bob Williams for these data.

Numbers of Moths per Week (Week 12, Ending 7/23/08)

Trap Location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Trap Location	Southwestern Corn Borer
Hardeman (Bolivar)	0	0	0	Fayette (Whiteville)	0
Fayette (Whiteville)	2	0	---	Tipton (Covington)	4
Fayette (Somerville)	0	0	0	Madison (Exp. Stn.)	0
Shelby (Millington)	1	0	0	Gibson (Exp. Stn.)	46
Tipton (Covington)	4	10	---	Dyer (Newbern)	0
Tipton (North)	24	0	6	Dyer (Samaria Rd)	198
Haywood (West)	8	6	0	Dyer (Fuller Rd)	176
Haywood (Brownsville)	0	4	0	Dyer (Welch Rd)	98
Madison (North)	2	5	---	Obion (Central)	716
Madison (Exp. Stn.)	0	0	0	Obion (Northeast)	633
Crockett (Alamo)	0	0	0	Gibson (Sims north)	132
Crockett (Maury City)	9	0	0	Gibson (Sims south)	98
Dyer (Bogota)	2	0	0	Gibson (King)	94
Dyer (Newbern)	16	4	---	Gibson (Idlewild)	3
Lake (Ridgley)	8	22	0	Gibson (Race Track)	120
Gibson (Kenton)	0	0	0	Gibson (Gibson)	45
Gibson (Exp. Stn.)	1	2	1	Lake (Hoecke)	171
Carroll (West)	5	2	3	Lake (Isom)	39
Lauderdale (Goldust)	18	34	4	Weakley (South)	225
				Weakley (North)	166
Total	100	89		Haywood (Hwy 19)	12

An asterisk (*) indicates trap was missing or knocked down.

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