

IPM NEWSLETTER

Update for Field Crops and Their Pests

No. 16

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

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Announcements: Milan No-Till field Day, Thursday, July 27 ([Additional Information](#))

Wheat and Barley Variety Trial data are now posted on the web ([Link](#))

Cotton Crop Update (Larry Steckel, Assistant Professor)

The Tennessee Ag-Statistics Service reports that 35% of our cotton is setting bolls compared to 45% last year and a five year average of 39%. Of course the big agronomic story of the week has been the heat and drought stress much of the cotton crop is experiencing. The northern half of West Tennessee received good rain last week and is the exception. The southern half of West Tennessee as well as Middle Tennessee missed those rains and the cotton crop is rapidly heading towards cutout. In fact for the April planted cotton the blooms can be readily seed at the top of the plant. Just driving by some fields in West Tennessee it is evident many cotton fields will never close the rows. It appears in a number of fields I have visited that some Pix applications were probably not needed. The good news is that there is a cold front coming through this weekend that will hopefully give the crop a break from the heat and provide some much needed rain.

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	1232	1145	1106	1057	1035	997	872
Brownsville	1306	1219	1175	1126	1099	1049	923
Covington	1197	1118	1085	1041	1019	972	849
Dyersburg	1318	1232	1187	1135	1113	1057	932
Huntingdon	1133	1058	1017	983	968	939	834
Jackson	1216	1136	1093	1049	1027	987	873
Memphis	1347	1251	1210	1152	1124	1078	937
Milan	1143	1069	1032	993	977	940	829

Late Giant Ragweed Control in Soybeans (Larry Steckel, Assistant Professor)

The main weed control call of the week has been on giant ragweed. Giant ragweed can be typically found in fence rows where it is not a problem. However, when it moves into row crop fields it quickly becomes a major weed problem. One reason it is a problem is that on a good day Roundup WeatherMax at the typical 22 oz/A rate will only provide about 70% control. Often after a glyphosate application on giant ragweed regrowth will quickly come from the lateral buds. Other popular herbicides like Reflex will also often not provide acceptable control. Field experience this year has

shown that once giant ragweed lives through a glyphosate or Reflex application it becomes more difficult to control. The reason for this is that herbicides like FirstRate which in our research has provided good control will typically not be translocated well enough in injured ragweed to provide adequate control. The question on how to control giant ragweed that is recovering from an earlier herbicide application are tough to answer. The best control option I have seen on injured ragweed is with a strong contact herbicide like Cobra. Even this application will often leave a few survivors.



Insect Issues (Scott Stewart, IPM Specialist)

Cotton: Where are all the bugs at? That has probably been the most common call of the last two weeks. Considering the fairly high abundance of stink bugs in prebloom cotton and soybean and some notable hot spots of early season plant bugs, I am surprised at how low our populations have been thus far. However, populations are starting to increase, and in some areas, numbers are above threshold. I've discussed plant bug and stink bug control at length in previous newsletters. I'll make one point again -- plan on two insecticide applications at a 5-7 day interval when populations are well above threshold. Consider bollworm infestations. In Bt cotton, a pyrethroid insecticide or a pyrethroid tank mix with Bidrin, Orthene, Vydate or dimethoate will provide control of bollworms, and the tank mix will improve control of plant bugs and stink bugs.

Moth traps are starting to show the beginnings of the bollworm flight in some areas. I've already had a couple of calls about 2-3% worms under bloom tags in Bt cotton. It is that time of year and expect at least an average bollworm flight and an above average tobacco budworm flight. When scouting, particularly in Bt cotton, it is important to spend time looking under bloom tags and in pink flowers. We should have a better idea about the size of the bollworm flight by this coming week. In non-Bt cotton, assume some worms are tobacco budworm. We had little flurry of budworms 3-4 weeks ago, at least in the southern counties of West Tennessee, and it is time for the next generation to kick off.

Spider mites are starting to reach treatment level in some fields on a pretty regular basis -- not too surprising considering the hot, dry conditions in parts of the state. I've touched on mite control in previous newsletters. Deciding when to control mites requires a little judgment. Normally, control will not be needed until at least 30-50% of plants show signs of feeding. But it is possible to have a bad infestation in only 10-20% of the field. It is also possible to have very light infestations on almost every plant, and in the right environment, treatment may not be needed. One hint --- consider control anytime you see a significant jump in mite activity from one visit to the next (for example, 2 or 3 hot spots turn into 6 or 8 spots).

Spider Mite Recommendations:

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

Aphid populations have blown up in isolated fields in parts of the state. I've seen treatable numbers in Henderson County and heard of treatable numbers in Carroll and Shelby counties. It is time to consider treatment when aphids are common on many plants, honeydew is accumulating, and some plants have leaves curling downward (pictured right). Treatment is more likely to pay for itself when the cotton is already stressed and droughty. Suggested treatments include Intruder, Centric, Trimax Pro and Carbine. Sometimes, you can do OK with products like Bidrin or dimethoate, other times they don't perform well. Despite some problems to our south with the neonicotinoid insecticides, I expect them to work well for us. Intruder is the best neonic at controlling aphids, even at rates as low as 0.6-0.8 oz/acre. This rate will not control much in terms of other pests that may be present. Carbine has a different mode of action than Intruder, Centric and Trimax Pro. This is worth noting if control problems develop in Tennessee as they have elsewhere.



Aphid Insecticide Recommendations:

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

Grape colaspis beetles are unusually common in cotton and other crops this year. The adults are defoliators but do not pose a significant threat. Adults especially like to feed on the bracts of squares and bolls. This causes windowpane type injury that is reminiscent of fall armyworm feeding on boll bracts. The beetles definitely “ugly up” the squares or bolls but really cause little injury to the important parts. In corn, adults will clip silks and occasionally cause problems with pollination. The larvae of this beetle feeds on roots of many plants. During the spring, feeding by the larvae can reduce stands of cotton (but more commonly in soybean). The photo above is courtesy of Marlin Rice (Iowa State University).



Cutout is already here for some fields (unfortunately, mostly the dry ones). Cutout is defined as having an average of 5 or fewer nodes above the uppermost, first-position white flower (NAWF). If a plant is fruiting normally, there should only be one first position white flower on any given day. *Suggestion:* Do not call a field at cutout until the week it drops below NAWF=5. Some fields may hover around NAWF=5 for several weeks, others will drop like a rock.

Use cutout to start the biological clock. White flowers present at cutout represent the last bolls you are likely to harvest. It takes about 350 DD60s, roughly 18-22 days at normal temperatures, before these last bolls are relatively safe from plant bugs, stink bugs, bollworms and most fruit feeding pests (fall armyworm may be an exception). It is a good bet you are done spraying for fruit feeding pests if a field is under threshold for pests at NAWF5 + 350 DD60s. This guideline does not mean you can walk away from a field infested with worms or bugs just because you hit the magic number. There is also the chance that spider mites, loopers or other late season pests that can reduce photosynthesis may require future attention.

Soybean: There have been very few calls about stink bugs or other pests in soybean.

Corn: Moth traps indicate that the southwestern corn borer flight is slowing down. However, Kevin Knop's traps in Obion and north Dyer counties still caught from 126 to 385 moths in four locations over a six day period. Hopefully those that intended to spray any non-Bt corn have already done so. Since the flight kicked off two weeks ago, larvae will have begun to tunnel into stalks and treatment will be less effective.

Fungicides in Cotton? (Dr. Melvin Newman, Extension Plant Pathologist)

There has been some **misinformation** spread around lately in some of the cotton growing counties that fungicides such as Quadris and Headline were recommended for spraying on cotton over the top of the foliage for various reasons. The fact is that these two fungicides **are not** even cleared by EPA to be used in TN in this manner. We have never recommended this nor will we until they are fully labeled (and only then if we have some research to indicate that there is good reason to spray these chemicals). Please, try and **stop such misinformation** so that our cotton producers are not at risk by using chemicals that are not labeled.

Area Cotton Report for Northwest Tennessee (Gene Miles, Area Crop Specialist, Week of 7/17)

Cotton: Part of the area remains dry while other parts have received enough rainfall to keep row crops under favorable growing conditions. Cotton growth stages in the area range from 13th node to early boll set. More mature plants in the delta area (planted April 12) are averaging 89 percent fruit retention, have 15 nodes and are averaging setting bolls on 21 percent of the fruiting positions. Some natural fruit shed has been observed this week and is occurring simply because of the plants inability to maintain 100 percent of its fruit load. Some fields being monitored this week have reached NAWF (nodes above white flower) equals 5 or physiological "cutout". NAWF equals five can be determined by counting from the top node (leaf size of quarter) down on 25 representative plants until you reach the node above the 1st position white bloom. When this number averages 5 across the twenty five plants selected, you have reached physiological "cutout".

Square retention in pre-blooming cotton this week ranges from 92-98 percent. Plant bug numbers range up to 3.7 per 6 row feet and/or 16 per 100 sweeps in blooming cotton. Spider mites are on the increase and are reported heavy in spots. Stink bug numbers range up to 1.6 per 6 row feet. Bollworm/tobacco budworm damage is being reported at the 3% damage level in conventional cotton and 1 worm per 100 plants (terminals) has been observed in Bt cotton. Aphid populations remain light. Beneficial counts this week range up to 11 per 6 row feet.

Soybeans: Stink bug numbers being reported in soybeans remain below threshold levels.

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

Hold on, better prices are coming! That seemed to be the optimistic view of several high powered speakers at a recent marketing seminar I attended. These better prices are not necessarily expected for this crop year, but for 2007 – 2008. This view is based on really two factors: 1) The continued increase in demand for renewable fuels – ethanol & biodiesel, and 2) Increase in demand from countries such as China & India.

As of May 2006, the U.S. has the capacity to produce 4.5 billion gallon of ethanol with another 2.2 billion gallons under construction. The Renewable Fuels Standard calls for a minimum usage of 4.0

billion gallons in 2006 and increases to 7.5 billion gallons in 2012. USDA is projecting corn usage for ethanol in 06/07 to be 2.1 billion bushels with 2.65 billion bushels in 07/08. As a comparison, we used 1.3 billion bushels in 04/05. So corn usage for ethanol is projected to increase and assuming feed, food, and seed usage stays the same, then either a) carryover will decrease causing prices to increase, b) corn acreage will increase to meet the growing demand. It is projected that even with an increase in corn acres in 2007, the carryover will not be a burdensome amount. The same story can somewhat be said for soybeans and biodiesel. The 2007 & 2008 corn and soybeans futures contracts are already starting to reflect some of the price bidding for acreage that we may see in 2007.

What about cotton? Cotton may also get caught up in price bidding for acres as it competes against renewable fuels in 2007. However, our greatest hope for improved prices will come from the increasing demand from China & India and the world picture. (Please note that we may see cotton prices improve sooner due to poor yields and high abandonment in Texas and the southeast crop in 2006. The August 12 yield survey report will give us the first look at what we might expect) The majority of growth in cotton demand the last 5 years has come from China. If this growth continues, then record production will be required in 07/08 and unless acreage and yields worldwide keep rising then prices will have to increase.

Whoa, sounds like we will definitely be in the money. I say that tongue in cheek, as we have heard some of this before, but maybe with different reasons. As the past has taught us, there are factors that can happen to derail these increased prices. Two of these are: increase in yields or overall production causing a plentiful supply; and recession- either in U.S. or the world (remember the Asian recession in 1998). So we know things can happen that will change price outlook and make prices volatile. This makes it even more important to have a plan (financial & marketing) in place and also not overlook sound marketing strategies that we know work – example forward pricing a portion of your crop at profitable prices. We also know that we need price/yield increases to keep up with rising costs. If UT Extension can assist in developing your financial or marketing plan, please let us know.

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

July 6 -12 (cycle 13) -- A total of 250 boll weevils were trapped. This is a 52% decrease from last week and a 60% decrease from this cycle last year. Eight-six percent of the capture was from Shelby and Tipton counties. The percent of fields with zero weevil captures ranged from 93% in Brighton work unit, 98% in both Brownsville and Dyersburg units to 99.9% in Alamo work unit. Year to date capture is down 54% from 2005.

July 13-19 (cycle 14) -- A total of 226 boll weevils were trapped. This is a 10% decrease from last week and a 68% decrease from this cycle last year. Ninety-one percent of the capture was from Shelby-Tipton counties. The percent of fields with zero weevil captures ranged from 93% in Brighton work unit, 99% in both Brownsville and Dyersburg units to 100% in Alamo work unit. Year to date capture is down 55% from 2005.

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 12, ending 7-18-06)

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)	7	44	0	---
Shelby (Ag Center)	3	12	---	---
Tipton (Covington)	0	2	0	---
Tipton (West)	1	0	---	0
Haywood (West)	0	2	0	---
Haywood (Brownsville)	3	1	---	---
Madison (Exp. Stn.)	1	2	0	14
Madison (North)	0	8	---	---
Crockett (Alamo)	0	0	0	---
Crockett (Maury City)	0	0	---	---
Dyer (Dyersburg)	0	0	0	---
Dyer (Newbern)	0	0	---	0
Lake (Ridgley)	3	27	0	---
Gibson (Kenton)	1	2	---	---
Gibson (Milan Exp Stn.)	0	8	0	98
Carroll (West)	0	0	0	---
Lauderdale (Goldust)	1	21	6	---

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

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Scott D. Stewart (editor)
Extension Cotton IPM Specialist