The University of Tennessee

UT Extension

West TN Research and Education Center
605 Airways Boulevard
Jackson, TN 38301

IPM NEWSLETTER
Update for Field Crops and Their Pests

No. 20 *August 8, 2008*

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

Bookmarks: Cotton progress Insect control Soybean fungicides Farm management Moth traps

Announcement: **Cotton Research Tour and Wheat Production Conference, September 3rd**, West Tennessee Research and Education Center, 605 Airways Blvd. Registration begins at 8:30 am, and the cotton tour begins at 9:00 am. See the flyer attached to the e-mailing of this newsletter for details concerning CCA and Pesticide CEUs (or link to this flyer on the web).

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

The Tennessee Agricultural Statistics Service reports cotton condition as 4% excellent, 57% good, 30% fair, 8% poor, and 1% very poor. 83% of the crop is setting bolls compared to 74% last week, 92% last year and 86% for the five year average.

Thank goodness for some rainfall. Most areas from Dyersburg south and east received at least some rainfall yesterday (8/7). Areas north of Dyersburg are still in need of rain. Overall the crop is very average state-wide. There are pockets of excellent cotton and not far away are areas of bumblebee cotton. Hopefully, if you received rain it will help fill bolls on the plant. Over the next 7 days all areas of Tennessee will eclipse the last effective bloom date. Next week I will begin calculating heat unit accumulation from August 10 forward to help aid in decisions for when to terminate insecticide sprays.

DD60 Accumulation (TASS and NWS data)

Location	4/20-8/7	4/27-8/7	5/4-8/7	5/11- 8/7	5/18-8/7	5/25-8/7	6/1-8/7
Dyersburg	1700	1655	1632	1595	1576	1496	1384
Fayetteville	1710	1653	1623	1569	1551	1471	1364
Jackson	1628	1580	1558	1515	1495	1426	1322
Memphis	1925	1856	1829	1771	1735	1638	1513

Insect Management (Scott Stewart, IPM Specialist).

Cotton. Stink bugs remain the #1 problem. You will notice in the area report by Gene Miles that one field had as high as 3.2 stink bugs per 6 row feet. I've also observed field with 2+ stink bugs per drop. These are big numbers. One stink bug per drop cloth represents a serious infestation and should be treated immediately. I've had more calls about increasing plant bug numbers. We have evaluated a lot of test plots this week looking at the efficacy of many insecticides on plant bugs and stink bugs. The data are similar to previous years. The traditional insecticides (Bidrin at 6 oz, Acephate at 0.67-0.75 lbs, Vydate at 12 oz) have performed well on the complex of plant bugs and stink bugs. Pyrethroid

insecticides tank mixed with lower rates of these same products or dimethoate (6-8 oz) or Diamond (4 oz) are also performing well. Premixed products such as Bidrin XP (4-5 oz), Endigo (4 oz), Cobalt (20-24 oz) and Leverage (5 oz/a) gave comparable control. I do not normally recommend a straight pyrethroid unless tarnished plant bugs are only present in low numbers.

Consider doing some boll damage evaluations for stink bugs, especially in borderline situations where you think drop cloths are not telling the whole story. Check 25-50 thumb sized bolls; bust them open and count any internal evidence of bug damage such as warts on the inner surface of the boll wall or stained lint. My colleagues in the Southeast feel this is a more reliable and less variable method for evaluating stink bug populations. Treat when boll damage exceeds 20% or if 1 or more stink bugs are present per drop cloth. *Pictured: dark, sunken lesions caused by stink bug feeding*

The bollworm flight is still running late and is not overly impressive. However, there is higher pressure in localized spots, and a few Bollgard fields are being treated with pyrethroid insecticides. The crop is quickly shutting down in the droughty areas, and bollworms will likely be a bigger problem on the better looking and later cotton. Moth traps indicate both bollworm and tobacco budworm are present. So expect tobacco budworm in non-Bt cotton.

Soybeans. Stink bugs are getting more common in many fields. As usual, the green stink bug is the primary species present. Standard rates of most pyrethroid insecticides including Baythroid (1.8 oz), Karate (1.6 oz), Mustang Max (3.0-3.2 oz), and Prolex (1.3-1.5 oz) will provide good control of green stink bugs. Brigade (4 oz) is an good choice especially if many brown stink bugs are present, or you can run higher rates of the above insecticides, or some folks are choosing to mix in acephate (0.25-0.33 lb) or methyl parathion (8 oz). All are good choices.

Corn earworms (bollworms) have me concerned. My counterpart in Arkansas (Dr. Gus Lorenz) said this in the worst and most widespread corn earworm problem he has seen in soybean, and the problem is running all across the state. Corn earworm larvae will feed on blooms and pods and will cause substantial damage when present in large numbers. Do your normal sweeps, but if you start catching a few corn earworm larvae, make sure you sweep deeper than usual or you will underestimate the population. Double digit numbers (10+ per 25 sweeps) are enough to justify an insecticide application, or treat when 3-4 larvae are observed per foot of row. Corn earworms often are a bigger threat in fields where the canopy has not closed. Pyrethroid insecticides are usually used for control and also do a good job of controlling infestations of some other pests (e.g., threecornered alfalfa hopper and stink bugs).

Threecornered alfalfa hopper numbers are still running high in many fields. UT's published threshold once plants are over one foot tall is 1/sweep (100 per 100 sweeps). I've already suggested that using a more aggressive threshold may be appropriate with the better commodity prices. The number I am using is 70 per 100 sweeps. However, I would "hold off" at this number in situations where a fungicide application will be made in the next 7-10 days. I think this is a good opportunity to piggyback insecticides without much risk. *Pictured: immature three-cornered alfalfa hopper*

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

Cotton: Wilted cotton plants are being noted in droughty areas of cotton fields this week. A good general rain would benefit all crops in the area. All fields being monitored through the Dyer and Lauderdale county cotton IPM programs have reached NAWF (nodes above white flower) equals 5 or physiological "cut out". Current research and demonstrations suggest that accumulating 350-450 heat units (DD 60's) from the "cut out" date is enough time to mature yield contributing bolls beyond the point when economic losses from bollworm/budworm, tarnished plant bug and stink bugs are likely to occur. Larger more mature plants monitored this week are averaging 14 visible first-position fruiting positions and have 77% first-position fruit retention. Plant bug numbers being reported from county IPM scouts and private consultants this week range up to 5.6 per 6 row feet and/or 27 per 100 sweeps. Stink bug numbers are on the increase with the highest number per field being 3.2 per 6 row feet. The threshold is considered to be 1 or more per 6 row feet. One private consultant has reported one conventional cotton field reaching the 5% fruit (squares, blooms, bolls) damage level which is considered to be the threshold. Also, two bollworm/budworm larvae per 100 terminals were reported in conventional cotton (4 larvae is considered to be threshold). Boll damage being reported in Bt cotton ranges up to 1% this week (with the threshold being 2%). Private consultants have also reported the "aphid fungus" (*Neozygites fresenii*) reducing aphid populations in the area this week. Beneficials range up to 10.8 per 6 row feet.

Soybean: Stink bug numbers are on the increase in soybeans this week. Numbers being reported from Dyer County soybean IPM scouts range up to 0.8 per 3 row feet. The threshold is considered to be 1 per 3 row feet (12/100 sweeps) in soybeans in the bloom to mid-pod fill stage of growth.

Soybean Fungicides (Melvin Newman, Professor, Extension Plant Pathologist)

Many soybean producers are now spraying their soybeans with a foliar fungicide. The best time to spray for late season diseases is at the R3 stage of growth. Under some conditions, when soybean prices are really good; a second application might be beneficial.

Since soybean rust is not a threat at this time, all that is needed for control of late season diseases is an EPA approved Strobilurin fungicide such as Headline or Quadris with a surfactant such as NIS or a COC. A premix or tank mix of a Strobilurin plus a Triazole fungicide is also effective as long as there is an adequate amount of Strobilurin in the mix. When making a second application, it is wise to use a tank mix or a premix of Strobilurin plus a Triazole. This would help reduce the chances of a built-up of resistant fungi to the Strobilurin fungicides.

Using just a Triazole for late season diseases such as Brown Spot, Frogeye Leaf Spot and Anthracnose would not be the best choice for maximum control. Basically, the Triazoles are best used for soybean rust control. Triazoles are necessary when there is a high risk for soybean rust. The risk of rust is very low at this time.

Downy Mildew is now being reported on some susceptible soybean varieties. This disease usually does not cause severe damage. However, seed quality can be reduced by this disease in some years. Foliar fungicides have not shown much control of this disease. We have very limited data on the current fungicides for control of Downy Mildew. But, we are putting in some tests this year to get more data. For more information on soybean diseases, disease resistant varieties and fungicides check the utcrops.com web site.

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

The 7th Annual Mid-South Ag Finance Conference was held on the campus of UT Martin on August 6. Once again, it was an excellent conference with good information. I would highly recommend for anyone involved in agriculture to attend in the future. I would like to share with you some of the information from this year's conference. Dr. Dave Kohl, Dr. Matt Roberts and Mr. Bob Eggerton made several points I thought where interesting that hopefully will get you thinking about your operation.

Dr. Kohl discussed Guidelines to watch (signs of trouble) in your operation:

- **Debt to asset ratio above 50%** - producers with a debt to asset ratio above 50% have to know their cost of production in their operation.
- **Working capital under 15% of expenses** – this can serve as a warning sign or red for the operation, between 15% - 33% is a caution or yellow and above 33% is green.
- **More than 5 sources of credit** – strong indicator of credit problems.
- **Credit score under 650** – Most producers probably don't know their credit score, but rest assure your lender or farm supplier does. Under 650 generally indicates problem paying loans back on time and sends up a flag to the lender. If you don't know how others view your credit, it would be a good idea to request your credit report. This can be done free at www.annualcreditreport.com or by calling 1-877-322-8228.
- **Expenses as a percent of revenue (excluding interest & depreciation) over 75%** - when expenses get to 75% of revenue and debt payments and family living or draws are added in, you are quickly up to around 100%. Producers with a high expense/revenue will need low debt load or payments and or a low percent of family living withdrawals going out of the farm.

Other comments made during the conference – **If it grows too fast it is a weed** – there is quite a bit of concern on how fast commodity prices, land prices, etc. have risen in the last 2 years. Of course, no one knows the future, but we could be in a situation where the commodity bubble will burse leaving input prices higher than average production will sustain. **Be careful of tax trap on buying equipment** – tax laws have changed which will allow you to write off or expense a large part of equipment purchases in the first year while making equipment payments for several years. **Get efficient before growth** – producers are constantly looking for more acres to spread their fixed cost. Before adding acres, make sure you are as efficient as you can be on current acres. **Build working capital reserves to work through the down cycle –** focus on building working capital during times of profitability.

If you have questions on where your operation is the Tennessee MANAGE program is available to Tennessee producers to assist in farm financial planning. We can examine various scenarios in your operation. Contact your Extension office for more information or call the MANAGEment Information Line at 1-800345-0561.

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 14, Ending 8/6/08)

Trap Location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Trap Location	Southwestern Corn Borer
Hardeman (Bolivar)	6	9	1	Fayette (Whiteville)	0
Fayette (Whiteville)	4	10	---	Tipton (Covington)	1
Fayette (Somerville)	0	0	0	Madison (Exp. Stn.)	9
Shelby (Millington)	0	0	0	Gibson (Exp. Stn.)	10
Tipton (Covington)	4	12	---	Dyer (Newbern)	15
Tipton (North)	15	0	4	Dyer (Samaria Rd)	114
Haywood (West)	0	0	0	Dyer (Fuller Rd)	46
Haywood (Brownsville)	2	4	0	Dyer (Welch Rd)	60
Madison (North)	0	11	---	Obion (Central)	141
Madison (Exp. Stn.)	9	204	10	Obion (Northeast)	117
Crockett (Alamo)	4	0	1	Gibson (Sims north)	
Crockett (Maury City)	2	27	5	Gibson (Sims south)	
Dyer (Bogota)	4	0	2	Gibson (King)	
Dyer (Newbern)	6	6	---	Gibson (Idlewild)	
Lake (Ridgley)	3	124	30	Gibson (Race Track)	
Gibson (Kenton)	0	97	0	Gibson (Gibson)	
Gibson (Exp. Stn.)	5	5	3	Lake (Hoecke)	105
Carroll (West)	0	10	5	Lake (Isom)	29
Lauderdale (Goldust)	4	1	52	Weakley (South)	231
				Weakley (North)	270
Total	**68**	**520**		Haywood (Hwy 19)	

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

Scott D. Stewart (editor)
Extension IPM Specialist