

## IPM NEWSLETTER

### Update for Field Crops and Their Pests

No. 16

July 16, 2009

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#### Weed Control (Larry Steckel, Weed Specialist)

**Glyphosate-Resistant Palmer Amaranth Report.** Phone calls continue to pour in on GR Palmer amaranth in soybean and cotton. A number of folks who thought earlier that a field was clean are now seeing Palmer sticking up through the canopy. There are some folks still trying to spray these glyphosate escaped Palmers while others have over \$50.00/acre in herbicide and are putting up the white flag. Some of the rescue treatments we have tried, like 16 oz/A of Flexstar + 2 oz/A of Butyrac, on 8" Palmer by 10 days after application provided about 50% control. Another combination we looked at was 32 oz/A of Flexstar + 4 oz/A of Butyrac on 16" Palmer. By 10 days after application, the Palmer appears to be recovering about as well as the soybeans. When GR Palmer gets into the double digits in inches on height the only way to control it is chopping or pulling.

It appears from my phone conversations and just driving through the state that GR Palmer is much more prevalent than what we first feared. Virtually every cotton and soybean field in the western most counties has at least a GR Palmer somewhere in the field. There are way too many fields that have a lot of GR Palmer escapes in those counties. As you move east of those counties the prevalence becomes less. We have moved from 10 counties with confirmed GR Palmer to 15 with a couple more in question. Kevin Rose found a Palmer amaranth in a cotton field that lived through 66 oz/A of Roundup PowerMax in Giles County. This is the first report of GR Palmer east of the Tennessee River.

**Trouble Controlling Common Ragweed?** We spent a couple days in middle Tennessee this week and one of the most prevalent weeds in soybean fields is common ragweed. This is a new development. The common ragweed appeared to be surviving at least 1 or 2 glyphosate applications. Some growers there have asked what they could add to the glyphosate to help control this weed. FirstRate would be my first choice but unfortunately Dow has run out again of FirstRate. Classic at 0.5 ozs/A or Flexstar at 16 oz/A would probably be the two best second choices.

#### Insect Considerations (Scott Stewart, IPM Specialist)

**Cotton.** Spider mites and plant bugs continue to be the biggest reasons for phone calls. It is not a cure but the recent rains will help alleviate the stress caused by spider mites. Plants can tolerate mite infestations better when not already facing moisture stress, and rain will wash some mites off the plant. Rain does not help with plant bugs. Plant bug infestations still vary widely, but the pressure is somewhat higher and more widespread than normal. Once cotton begins vigorously blooming, UT

recommends switching to “older” chemistries for plant bug and stink bug control. This includes products like Bidrin (5-8 oz/a), Orthene 90S (0.67 – 0.75 lb/a) and Vydate (10-12 oz/a). However, I really like tank mixes of pyrethroid insecticides with half rates of the above insecticides. Other options to consider are the pyrethroid insecticides tank mixed with Diamond (4-6 oz /a) or Dimethoate (6-8 oz). These mixes will provide good plant bug/stink bug control and also provide some insurance from bollworm or fall armyworm infestations. Granted that insurance against “worms” is less needed on Bollgard II or WideStrike varieties, but it still has some value. Diamond is especially good if fall armyworms are in the mix. There are also some pre-mixes to consider such as Bidrin XP, Cobalt, etc. Once blooming begins, avoid using the neonicotinoids such as Centric or Trimax Pro as much as possible. This is as much for resistance management as anything else. We are already extensively using this class of chemistry on the seed and for early-season plant bug control.

Stink Bug Sampling and Thresholds in Blooming Cotton – Besides tarnished plant bugs, a drop cloth will pick up stink bugs and clouded plant bugs. When multiple species are present, count clouded plant bugs as equivalent to 1.5 tarnished plant bugs and count stink bugs as equivalent to 3 tarnished plant bugs. Thus in blooming cotton, you have reached threshold if you have averaged 0.5 stink bugs and 2.0 tarnished plant bugs per drop. *Note: the treatment threshold is an average of 3 tarnished plant bugs or 1 stink bug per drop cloth.* Treatment decisions should be based on a minimum of six drop cloths per field. The drop cloth is not really the ideal sampling method for stink bugs. An alternative threshold is to treat when 20% of thumb sized bolls show internal signs of stink bug injury. I sometimes use this threshold as a backup when I am in doubt. It requires the examination of at least 50 bolls per field.

Bollworms – We are seeing indications in the moth traps and the field of increasing bollworm pressure. I still think we are 7-10 days from really kicking off the bollworm flight across the area, but treatment level infestations could potentially occur anywhere from this point forward. Remember – the treatment threshold for bollworm in cotton is when 4% of plants are infested with larvae. BUT on Bollgard, Bollgard II and WideStrike varieties, it is generally recommended that we ignore recently hatched larvae, giving the Bt technology a chance to work. Of course this has limits, and some judgment is required. The presence of many eggs or tiny larvae can certainly justify an insecticide application for the original Bollgard technology.



**Soybean.** It has been quiet. A few calls about stink bugs have come in, but most folks that are treating based on whether or not they are making a fungicide application. Applying fungicide does not mean you have reached the stink bug threshold. With the recent rains, there will be a lot of fungicide applied in the next few weeks. You should sample before making this application to determine if adding an insecticide is warranted. If not, save your insecticide for another day. *Remember:* you will be lucky to get seven days of effective residual control from an insecticide application. Do not think a spray at R3 will protect you for the rest of the season.



An average soybean field probably needs about one foliar insecticide application per year in West Tennessee. Some fields won't need sprayed, some will need two applications, and a few may need two or more insecticide applications. The trick is knowing when and where. Later maturing fields are most likely to have issues with stink bug or late season caterpillar infestations (i.e., loopers). If you are routinely making 3+ insecticide applications, you are almost certainly spraying too much. You are spraying too little if you never pull the trigger. *Adult green stink bug pictured above*

Stink bug will be the most likely target pest. Use the treatment thresholds below. The early season threshold is very aggressive so there is no reason to cut it further. UT treatment thresholds for other pests can be found at [http://www.utextension.utk.edu/fieldCrops/cotton/cotton\\_insects/pubs/PB1768-Soybean.pdf](http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/pubs/PB1768-Soybean.pdf). A sweep net is your best friend. Pay special attention to flowering beans for corn earworms, especially in the wide-row beans that seem more common this year.

Stink Bug Treatment Thresholds in Soybean:

- R1 (first bloom) to R5.5 (mid-pod fill) ..... 12 stink bugs per 100 sweeps
- R5.5 (mid-pod fill) to R7 (beginning maturity) ..... 36 stink bugs per 100 sweeps

**Corn.** The only pest of significant concern right now is the southwestern corn borer (SWCB) in non-Bt corn, but it is a big issue in some areas. We are at or just past the peak in the SWCB moth flight (see appended moth traps) and treatments are clearly justified in the high pressure spots. Intrepid (4-6 oz/a) is a preferred treatment for SWCB because of its rainfastness and residual control, but the pyrethroid insecticides also provide decent control. The bad news – late maturing non-Bt corn can be severely damaged by SWCB. The good news – the rain will help alleviate some of the additional stress caused by corn borer infestations. Once corn reaches the dent stage it is relatively safe from new infestations. *Remember* - timely harvest is important to prevent yield losses in fields heavily infested by corn borers. *SWCB eggs pictured above*



**Regional Report (Hayden E. “Gene” Miles, Area Extension Specialist, Northwest Tennessee).**

Cotton - Most areas received good amounts of rain this week. Growth stages of cotton fields being monitored by IPM scouts and private consultants range from 11<sup>th</sup> node to early bloom. More mature cotton plants in the Delta area this week are averaging 15 nodes and have 91 percent 1<sup>st</sup> position fruit retention. Natural shedding has begun to occur in more mature fields this week especially in droughty areas. Also more mature plants in droughty areas of fields have reached NAWF=5 or physiological cutout. Mepiquat chloride is being applied at recommended rates where cotton fields have had adequate moisture and are not under stress. Plant bug numbers from private consultants and IPM scouts range up to 20/100 sweeps and/or 2.2 per 6 row feet. Square retention being reported this week ranges from 80-100 percent. An early field planted on April 18<sup>th</sup> reached the stink bug and plant bug combination threshold and is being treated with the recommended rate of Bidrin to control both insects. Private consultants and IPM scouts are reporting spider mites reaching the economic threshold which is considered to be when 30-50 percent of plants are affected and mites are still present. Some

fields are being treated the second time on a 4-5 day schedule to control hatching spider mite eggs. Beneficial counts this week range up to 9.2 per 6 row feet.

Soybeans - One soybean producer reported this week that the recommended insecticide Baythroid XL applied at the recommended rate did an excellent job in controlling striped blister beetles in soybeans.

**Farm Management (Chuck Danehower, Area Specialist - Farm Management)**. On Friday, July 24 at 7:30 a.m. a special cotton meeting will be held online and by teleconference. This program will include a panel of cotton experts to discuss today's cotton market including crop conditions, domestic demand, exports and farm policy. The panel will include Dr. O.A. Cleveland, Professor Emeritus, Mississippi State; Dr. Carl Anderson, Professor Emeritus, Texas A & M; Jarral Neeper, Vice President Marketing, Calcot, Ltd.; Mike Stevens, Swiss Financial Services; Elton Robinson, Farm Press Services; and Joe Nicosia, CEO, Allenberg Cotton.

Listening options are 1) Call 1-866-381-5546 to listen over the telephone. Conference ID is Ag Market Network. 2) Listen live over the internet at <http://www.agmarketnetwork.net/> or 3) Listen to a recording around noon at <http://www.agmarketnetwork.net/>.

**Reminder** - *Decisions 2009* put on by Brock Associates. A copy of the brochure can be found online at <http://www.brockreport.com/seminars.php>. Speakers include Drew Lerner on summer outlook, Barry Knight on new advances in technology, Richard Brock on grain price outlook & strategies. Other speakers will also address farmland values, a global perspective of farm inputs, and information management. This seminar will be **July 20** in Memphis at the Peabody Hotel and has a registration fee of \$110. It starts at 8 a.m. and will adjourn at 3:00 p.m. Register by calling 1-800-558-3431.

**Reminder** - 8<sup>th</sup> Annual Mid-South Agricultural Finance Conference on **August 5**. 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. Tom Payne, and Carl Babler. Dr. Kohl and Dr. Payne will provide practical information on interpreting economic change as it pertains to agriculture. Dr. Kohl will focus on ways lenders and producers can work together; examine important benchmarks in farm operations and discuss key financial indicators for success. Mr. Babler, a broker and hedge specialist, will discuss hedging opportunities for producers and looks at ways to reduce risks and sustain profits. More information on this very educational conference can be found at <http://www.utm.edu/agconference/> or by calling 731-881-7324 or emailing Dr. Tom Payne at [tpayne@utm.edu](mailto: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. Thanks to the County Extension Agents who are also running southwestern corn borer traps.

**Numbers of Moths per Week (Week 11, Ending 7-15-09)**

| Trap Location          | Tobacco Budworm | Corn Earworm (Bollworm) | Beet Armyworm | Trap Location          | Southwestern Corn Borer |
|------------------------|-----------------|-------------------------|---------------|------------------------|-------------------------|
| Hardeman (Bolivar)     | 2               | 3                       | 2             | Fayette (Whiteville)   | 0                       |
| Fayette (Whiteville)   | 0               | 0                       | ---           | Tipton (Covington)     | 3                       |
| Fayette (Somerville)   | 0               | 6                       | 0             | Madison (WTREC)        | 116                     |
| Shelby (Millington)    | 0               | 0                       | 0             | Crockett (Maury C.)    | 6                       |
| Tipton (Covington)     | 2               | 5                       | ---           | Obion (Midway)         | 183                     |
| Tipton (North)         | 4               | 19                      | 0             | Obion (Crockett)       | 240                     |
| Lauderdale (Goldust)   | 0               | 15                      | 0             | Obion (Union City)     | 56                      |
| Haywood (West)         | 0               | 0                       | 0             | Obion (Obion)          | 51                      |
| Haywood (Brownsville)  | 0               | 7                       | ---           | Lake (Owl Hoot)        | 21                      |
| Madison (WTREC)        | 1               | 39                      | 14            | Lake (Croanville)      | 227                     |
| Madison (North)        | 3               | 8                       | 0             | Lake (New Markham)     | 261                     |
| Crockett (Alamo)       | 0               | 4                       | 0             | Haywood (B'ville)      | *                       |
| Crockett (Maury City)  | 0               | 8                       | 0             | Haywood (Hwy 19)       | *                       |
| Dyer (Dyersburg)       | 0               | 6                       | 0             | Dyer (Newbern)         | 97                      |
| Dyer (Newbern)         | 0               | 5                       | 0             | Dyer (Craig Rd)        | 84                      |
| Lake (Ridgley)         | 0               | 65                      | 3             | Dyer (Hwy 104 E)       | 85                      |
| Gibson (Kenton)        | 3               | 8                       | 1             | Dyer (Parker Rd)       | 185                     |
| Gibson (Milan REC)     | 0               | 0                       | 0             | Weakley (Ore Sprg.)    | 409                     |
| Carroll (Coleman Farm) | 0               | 4                       | 0             | Weakley (Greenfield)   | 42                      |
|                        |                 |                         |               | Weakley (Bean's S.)    | 249                     |
|                        |                 |                         |               | Gibson (MREC)          | 120                     |
|                        |                 |                         |               | Gibson (Rutherford)    | 18                      |
|                        |                 |                         |               | Gibson (Strawberry)    | 375                     |
|                        |                 |                         |               | Giles (Tarpley Shop)   | 81                      |
|                        |                 |                         |               | Giles (Agnew)          | 20                      |
|                        |                 |                         |               | Henry (Tosh Farms)     | 630                     |
|                        |                 |                         |               | Lincoln (Molino)       | 208                     |
|                        |                 |                         |               | Lincoln (Camargo)      | 195                     |
|                        |                 |                         |               | Lincoln (Meridianvil.) | 63                      |

An asterisk (\*) indicates the trap was missing, knocked down, or no report was received.

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