

IPM NEWSLETTER

Update for Field Crops and Their Pests

No. 24

August 23, 2007

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

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Reminder: Soybean Field Day, Milan, August 31 (8 AM - Noon). This program is focused on hands-on training related to soybean diseases, insects, weeds and irrigation. This day is for everyone including producers, agents, seed companies, chemical companies, chemical dealers and distributors, researchers and any one interested in growing soybeans. Additional details are available at: <http://www.utextension.utk.edu/fieldCrops/upcomingevents.html>.

Cotton Progress Report (Chris Main, Extension Cotton and Small Grains Specialist)

The Tennessee agricultural statistics agency reports that 20% of the crop has open bolls compared to 4% last year, and well ahead of the 5 year average of 5%. Cotton condition is rated as 4% very poor, 22% poor, 37% fair, 31% good and 6% excellent.

Upcoming Field Days - Defoliation demos are being set up in several counties to show how different defoliation products are working this year. The first field day associated with these demos will be held on **Monday August 27, at 8:30 am near Ripley, TN**. The plot is located on Highway 19 west of Ripley. When you drop off the bluff the demo is located in the first cotton field on your right (approximately 2 miles from the bottom of the bluff). We have 8 different treatments including Def, Dropp, Firstpick, Finish, Aim, ET, Blizzard, and Prep.

We are also conducting a **cotton tour of research plots at the West Tennessee Research and Education Center in Jackson, TN on September 12**. The Center is located at the corner of Airways Blvd. and Highway 45 bypass. Follow signs along the station drive way to the parking area. We will start registration at 7:30 am and the tour begins promptly at 8:00. You will see cotton variety trials, defoliation treatments, late season weed control, late season insect control, nitrogen and potassium regimes on 20 year old no-till plots, and foliar fungicides for cotton. We will end the tour prior to lunch so producers can get home in time to begin harvest. Please see the program announcement at <http://www.utextension.utk.edu/fieldCrops/upcomingevents.html>.

Terminating Irrigation - Arguments can be made about the best time to terminate irrigation. Typically when you begin to see open bolls in the field you can stop irrigation without taking a yield hit. In my irrigated plots, I terminated irrigation when half of the varieties had open bolls. My biggest concern is that if irrigation continues when bolls begin to open is that water can enter cracked bolls and cause rot to develop. We don't need to hurt lint quality chasing top bolls that contribute very little to yield or profit.

Defoliation - The topic of the week has been defoliation. What is working, what is sticking leaves? My recommendation is to choose hormonal type products (Dropp, Freefall, FirstPick, and Finish). The addition of ethephon (Prep, SuperBoll, etc.) will help get bolls open and aid in leaf removal. I would

base my ethephon rate on the height and foliage density of plants in each field. I have been using 1-1.5 pints per acre. Some producers I have talked with are going with up to 2 pints per acre in irrigated cotton. I would strongly consider using a product containing thidiazuron (Dropp, Freefall, etc) to help prevent re-growth in case Mother Nature decides to bless us with some rain. If you decide to use a herbicidal defoliant (Def, Aim, Blizzard, ET, or Resource) use the lowest labeled rate to help prevent leaf stick. Listed below are the replant intervals for small grains following different defoliants. Most of us will be limited in planting small grains to 30 days after defoliation since most everyone uses ethephon. This restriction should not pose a problem this year with our early cotton crop.

Label Restrictions for Planting Small Grains Following Application as a Harvest Aide in Cotton

| | |
|------------------------|----------|
| Def/Folex | None |
| Thidiazuron | 14 days |
| Harvade | 6 months |
| Ginstar | 1 month |
| Leafless | 6 months |
| Aim | None |
| ET | None |
| Blizzard | None |
| Resource | 30 days |
| Prep/SuperBoll, others | 30 days |
| FirstPick | 30 days |
| Finish | 1 month |
| Glyphosate | None |
| Sodium Chlorate | None |
| Paraquat | None |

I have started calculating heat units past cutout in a table below. This will help determine when to terminated insecticide sprays and when to apply defoliant. Once a crop is 350 heat units past cutout we typically can stop insecticide sprays without suffering economic losses. Also, at 850 heat units past cutout we can begin to think about defoliation.

DD 60 Accumulation (TASS and NWS data). For each location Accumulated DD60's are calculated starting with six different planting dates up to the date of the newsletter release. For example 4/20-8/1 would indicate DD60's accumulated for cotton planted on April 20 up to August 1.

DD60 Accumulation since Planting.

| Location | 4/20-8/22 | 4/27-8/22 | 5/4-8/22 | 5/11-8/22 | 5/18-8/22 | 5/25-8/22 |
|--------------|-----------|-----------|----------|-----------|-----------|-----------|
| Brownsville | 2121 | 2073 | 2021 | 1950 | 1848 | 1803 |
| Dyersburg | 2187 | 2138 | 2082 | 1977 | 1902 | 1843 |
| Fayetteville | 2239 | 2192 | 2129 | 2040 | 1962 | 1893 |
| Memphis | 2566 | 2526 | 2430 | 2390 | 2219 | 2134 |
| Milan | 2017 | 1970 | 1918 | 1816 | 1746 | 1704 |

DD60 Accumulation since Cutout (NAWF=5).

| Location | 8/1-8/22 | 8/8-8/22 | 8/15-8/22 | 8/22- | 8/29 | 9/5- |
|--------------|----------|----------|-----------|-------|------|------|
| Brownsville | 546 | 371 | 190 | | | |
| Dyersburg | 551 | 369 | 183 | | | |
| Fayetteville | 562 | 381 | 190 | | | |
| Memphis | 613 | 422 | 204 | | | |
| Milan | 519 | 352 | 182 | | | |

Insect Issues (Scott Stewart, IPM Specialist)

Soybean. Very few calls are coming in related to soybean insects. This reflects generally low pest pressure and a general disgust in yield potential given the dry conditions. However, some fields are “hanging on” or caught a shower, and we still need to be watchful for stink bugs, green cloverworms and loopers. We need to sample and treat fields as needed until R8, when most pods are filled. Virtually every field I’ve seen has some *Dectes* stem borer larvae tunneling inside the stalks (pictured right). Infestation levels are 50-90% in many fields. Unfortunately, there is nothing we can do about this at the present time. You can learn more about this pest at: <http://www.utextension.>



[utk.edu/publications/spfiles/SP503-F.pdf](http://www.utextension.utk.edu/publications/spfiles/SP503-F.pdf) or <http://extension.missouri.edu/explore/agguides/pests/g07152.htm>. The biology of this insect is similar to southwestern corn borer in that larvae overwinter inside the stalk at the base of plants (including soybean and other hosts such as giant ragweed and cocklebur).

Corn. Proceeding through harvest quickly will help reduce ear drop and lodging caused by corn borers in non-Bt corn fields. After this windy week, I’ve seen several fields where lodging by southwestern corn borer (SWCB) is becoming evident. This is a good time to assess how big a corn borer problem you had on your farm. Lodging, particularly below the ear, is characteristic of SWCB. However, there are also other things that may cause lodging including some common stalk rots. You won’t have to look at many plants to determine if SWCB was a problem your fields. Holes in the stalk are a sure sign of infestation. Remember - SWCB larvae overwinter inside the stalk - usually just below ground level. Overwintering larvae generally leave a characteristic “girdle” near the base of the plant (pictured). There is often a clean break if the girdle goes completely around the stalk. You can look for this after harvest.



Overwintering SWCB Larvae (left and center) and Girdled Stalk (right)

Moth Traps. We are pulling up the moth traps this week. Thanks to the state support from Cotton Incorporated for helping to fund this trapping effort. Not only do we use these data to predict potential pest problems, we also use moths for assaying resistance to insecticides.

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

Corn harvest has started and with the increase in corn acres, some producers will have more acres than can be harvested on a timely basis. These producers may look to custom harvesters to help them get their crop out. Also, some producers may look to earn additional income by custom harvesting. How much should custom harvesters charge/make an acre? I use several sources to derive an estimate of custom harvesting cost. These sources include custom rate guides and UT budgeted cost.

The latest custom rate guide I have is from Kentucky and examines custom rate costs from several states. They use an average rate as well as list 15% below average and 30% above average. These differences help account for the efficiency among producers. The higher cost custom rate should capture more of the custom operators working with less efficient equipment. In the UK Custom Rate Guide, custom combining of corn has an average rate of \$26 acre - \$28 acre. The below average and above average ranges are \$22 - \$36 acre.

The UT budget adjusting for a diesel price of \$2.35 gallon estimates total cost per acre for combining corn with an 8 row header at \$29.26 per acre. This cost is composed of \$17.86 an acre of fixed machinery cost, and \$11.40 per acre of variable (fuel, repairs, & labor) cost. Individual cost will vary depending on age and size of equipment as well as travel distance to the fields to be harvested. The UT cost does not include any profit margin that a custom harvester may charge. A typical profit margin may be in the range of 5% - 15% of cost. Using the custom rate guide and estimated cost of operation + profit gives a range of \$26 - \$34 per acre for custom combining of corn.

Hauling corn to a bin or grain elevator is also market driven and may depend on quantities hauled. Shorter distances from the field to storage appear to be in the range of \$.07 - \$.12 bushel, less than 30 mile haul - \$.20 bushel, 30 – 50 mile haul - \$.25 bushel, and a greater than 50 mile haul - \$.30 - .35 bushel. These rates may change as we get through harvest and see what unloading times are at local elevators.

Use these rates as a guide in determining custom rates. Actual custom rates will be determined through the supply and demand for services within localized markets and can vary substantially.

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 16, Ending 8-22-07)

| Trap Location | Tobacco Budworm | Corn Earworm (Bollworm) | Beet Armyworm | Southwestern Corn Borer |
|-------------------------|------------------------|--------------------------------|----------------------|--------------------------------|
| Hardeman (Bolivar) | 0 | 0 | 0 | --- |
| Fayette (Whiteville) | 0 | 2 | 0 | --- |
| Fayette (Somerville) | 4 | 10 | --- | 0 |
| Shelby (Millington) | 25 | 49 | 0 | --- |
| Tipton (Covington) | 4 | 8 | 0 | --- |
| Tipton (North) | 8 | 79 | --- | 0 |
| Haywood (West) | 0 | 0 | 0 | --- |
| Haywood (Brownsville) | 0 | 3 | --- | --- |
| Madison (North) | 0 | 14 | --- | --- |
| Madison (Exp. Stn.) | 24 | 20 | 4 | 59 |
| Crockett (Alamo) | 4 | 12 | 0 | 0 |
| Crockett (Maury City) | 0 | 24 | --- | --- |
| Dyer (Bogota) | 0 | 7 | 0 | --- |
| Dyer (Newbern) | 2 | 8 | --- | 60 |
| Lake (Ridgley) | 1 | 21 | 0 | --- |
| Gibson (Kenton) | 0 | 0 | --- | --- |
| Gibson (Milan Exp Stn.) | 0 | 4 | 0 | 6 |
| Carroll (West) | 0 | 0 | 0 | --- |
| Lauderdale (Goldust) | 9 | 5 | 31 | --- |

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

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