

IPM NEWSLETTER

Update for Field Crops and Their Pests

No. 10

June 4, 2009

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

Bookmarks: [Insect stuff](#) [Weed control](#) [Soybean update](#) [Farm management](#) [Moth traps](#)

Insect Stuff (Scott Stewart, IPM Specialist)

Thrips in Cotton. I've had reports from "the thrips are eating us up" to "the seed treatments are doing great." Regardless, I think the decision to spray or not spray cotton needs to be made by 14-21 days after planting and based just as much on how fast the cotton is growing as on thrips numbers. Do not fall into the trap of treating based just on the presence of injury. If you do, your applications will be late. Treat 1st leaf cotton anytime you find 1 or more thrips per plant and especially if immature thrips are present. Larger cotton can tolerate higher numbers, and if you can see that emerging leaves look good, you have a good indication that you are out of the woods. A good rule of thumb is that any necessary thrips applications should be made before the 3rd true leaf. Get in and get out as early as possible. *Pictured: thrips damage on untreated cotton*



Orthene or Acephate, Bidrin and Dimethoate are the preferred treatments for thrips. Try to avoid applying synthetic pyrethroids on pre-flowering cotton (e.g., Karate, Baythroid, Mustang Max, Asana XL, Prolex, etc.). They will provide decent control of thrips but are notorious for flaring spider mites and aphids. Pyrethroids won't always flare mites or aphids, but they increase the risk of problems. This is why pyrethroid insecticides do not show up on many lists of insecticides to use early in the season. Of course, sometimes you may have to use a pyrethroid insecticide for some specific or unusual pest problems (e.g. cutworms).

There is some "salesmanship" going on about not using Orthene/Acephate with Sequence or other Dual-containing products. Part of this comes from the Sequence label which indicates that "Sequence can be tank mixed with the following insecticides: Centric, Karate." Note that this statement **does not** prohibit tank mixes with other, non-Syngenta insecticides. Whether or not Syngenta will "stand behind" other tank mixes is their call. Will there be leaf burn if Orthene/Acephate is applied with Sequence or Dual? Dual applied alone will sometimes cause leaf burn (and even more so if in combination with glyphosate). Thus, it is not uncommon to see some leaf injury when Sequence is applied to cotton or soybean. I've had tests applying Sequence with and without acephate, and adding acephate did not make visible injury appreciably worse. The presence of Dual was the key to seeing

injury (when injury occurred). However, I would avoid using Dimethoate tank mixed with Dual-containing products. Both can cause leaf burn, and you may get a double whammy if sprayed together.

Keep in mind that the leaf burns we see from Dual or Sequence would only rarely have effects on yield. The potential for problems concern me most when the cotton is struggling, and current growing conditions are on our side. You can always reconsider whether you really need to apply the insecticide. Or you can delay applying Dual-containing products until the third leaf or later. You may still see leaf burn at this stage, but the cotton will better tolerate any injury. However, if you are applying Dual-containing products and insecticides together, the risk to adding Orthene/Acephate at 0.2-0.25 lb/acre is being greatly overstated.

False Chinch Bugs in Cotton and Soybean -- Just a heads up on this pest although I am only aware of one problem field at this time. False chinch bugs can affect both cotton and soybean. When present in high numbers, they can quickly kill seedling plants, essentially sucking them dry. There can be dozens to hundreds of bugs on one plant. When serious problems occur, the population will be composed mostly of nymphs (immatures).

False chinch bugs feed on several weedy hosts. Infestations sometimes occur along field edges where immatures are migrating from ditch banks and other non-crop areas. However, hatching nymphs can also be stranded in fields after burndown herbicides kill their weed hosts. Infestations are often spotty and can be easily missed. Insecticide seed treatments provide some suppression but are not adequate if enough bugs are present. False chinch bugs are not easy to get rid of, in part because they often occur in large numbers. ULV Malathion at 12-16 oz/acre has looked very good in the past. Endigo (5 oz/a), Brigade (5 oz/ace), and Cobalt



(24 oz/a) are worth considering. Some mixtures may also work (e.g., pyrethroid + Orthene, pyrethroid + Lorsban or Nufos), but do not use cut rates. Try to get by cheap and I'll bet you'll spray twice.



Photo: Angus Catchot



False Chinch Bug Adults (L) and Immatures (R): Adults are about one-third the size of a tarnished plant bug with clear, silvery wings. Pictured Top: dying plants as bugs move from plant to plant.

Weed Control (Larry Steckel, Weed Specialist)

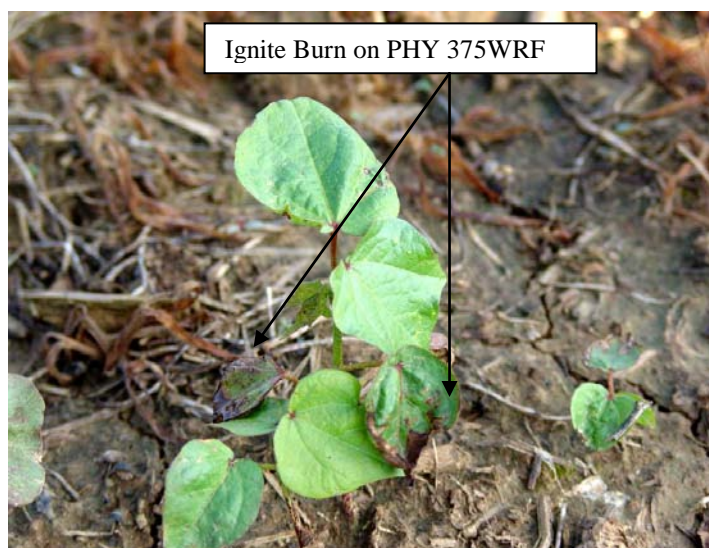
Horseweed Control. There has been a major flush of glyphosate-resistant horseweed over the past three weeks. Judging by the calls I have received over the last week many of you have noticed this as well. The long, wet cold spell was very conducive to germination of horseweed. On top of that all the rain has obviously dissipated all the pre applied herbicides that provide residual control of horseweed. The question is now what are good options to control horseweed in crop?

In corn we have many options but two that have worked well this year are Status or one of the bleaching herbicides (Callisto, Laudis and Impact). In soybean FirstRate at 0.45 ozs/A is one option that can provide good control of horseweed that is less than 8" in height. In cotton 0.15 ozs/A of Envoke will provide some control and check up horseweed growth. Then a hooded application of Ignite or Direx + MSMA can then finish the slow growing horseweed a few weeks after the Envoke application. Finally in both Liberty Link soybean and cotton, Ignite at 22 to 29 ozs/A can provide good control of horseweed. Ignite is a very effective horseweed herbicide when it air temperatures are hot. In our research we have controlled 18" tall horseweed with just 29 ozs/A when daytime temps are in the 80s or 90s.

Horseweed Control in Double Crop: Green patches of glyphosate-resistant horseweed are noticeable in some wheat fields that are drying down. This weed is hard enough to control when undisturbed let alone when they have been cut off by a grain table. Unfortunately, there are no complete options to control these weeds after wheat harvest. One recommendation that can provide about 70 to 80% control is 40 to 48 oz/A of Gramoxone Inteon + 4 oz/A of Sencor + 0.25% NIS. With these really warm temperatures another good option is Ignite at 29 oz/A. Apply at 15 gal/A of water to obtain best results with either of these options.

Ignite Applications on PhytoGen 375WRF.

The other frequent question over the past week has been about using Ignite post emergence in PhytoGen 375 WideStrike cotton. Judging by my calls most of you are aware that the WideStrike Bt trait is linked to glufosinate (Ignite) tolerance. The first question is how tolerant are WideStrike cotton varieties to Ignite? In our research over the past 3 years in Tennessee we typically see 10 to 20% injury. This injury we are seeing is leaf burn, and it makes small cotton look rough for a while. Under good growing conditions though, the cotton has come out of this burn in a week or so. In our work we have not seen this injury reduce



yield or delay maturity. Small plot research can give you a good hint about the level of tolerance, but the true judge of tolerance is when it is used on thousands of acres where many more environments by herbicide interactions can be seen. Therefore, I talked to my colleague Dr. Stanley Culpepper in Georgia where many growers have had to spray WideStrike cotton with Ignite to control GR Palmer amaranth. He told me that in his research as well as most farmer fields they have seen similar results to our small plot research. However, Stanley went on to add that on occasion they will see leaf burn

above 20% and as high as 30%. He told me that they have never documented yield loss from even this higher level of injury.

The injury above 20% he reported does concern me a little as my experience has been that injury above 20% can delay maturity. In a year when we have a lot of cotton planted in late May and on into June this could be a problem that would never be an issue in Georgia with their long growing season. What this points out to me is that we should not spray wall to wall all the Phytogen 375WRF in the state with Ignite. However, it is an option you have in your hip pocket if GR Palmer amaranth, giant ragweed or horseweed is over running the crop.

The other question - is Ignite labeled to be applied to a WideStrike cotton variety? The folks in Georgia got confirmation from the EPA that this is a legal application. Indeed, in reading the Ignite label it refers to using Ignite on cotton varieties with tolerance. No one can argue that WideStrike varieties have tolerance to Ignite. However the folks at Bayer, the marketers of Ignite, and Dow who sell the very popular PHY 375WRF have made it clear they do not recommend nor will they stand behind this practice if there is a problem. In other words you are on your own!

Soybean Update (Angela Thompson McClure, Extension Corn & Soybean Specialist)

Replant Decisions in Soybean In areas that received moderate rains, good soil moisture and warmer temperatures have helped soybeans emerge quickly and some parts of Tennessee have beautiful soybean stands. Unfortunately, other areas that received heavy, hard rains on newly planted fields are in the process of evaluating stands and making replant decisions. With warm temperatures we should not have to wait more than a week to determine if a field will have a stand. Where soil is sealed over, a timely shower can sometimes soften the ground enough for beans to push through. **Make sure to accurately estimate the viable plants in a field, taking into account both stand and uniformity of stand.** A soybean plant can compensate for a thinner stand by producing more branches and pods per plant and some USDA research has shown pretty impressive yields with stands of 80,000 or below in decent rainfall years. Maturity Group 4 and 5 soybeans with remaining uniform stands close to 100,000 plants or more should be left alone. It is getting too late in the season to try to plant Maturity Group 3 soybeans unless the field in question is under irrigation. MG3 fields should be left alone unless populations are below 110,000 (data indicate a MG3 can yield well with lower populations under irrigation).

- When beans are “skippy” only in spots, consider spot replanting instead of driving over beans to “add to” the population of an existing stand.
- To ‘add to’ a thin stand, drive at a diagonal across (versus planting right beside) original rows. This may reduce the number of plants that are run over or destroyed by the planter in the process of adding to a stand.
- **If the decision is made to ‘add to’ a stand, do it quickly when original beans are small.** If the first planted beans are at the unifoliate or 1st trifoliate stage, you can use the same variety or similar maturity group to increase the stand and the crop should be pretty uniform at harvest. For soybeans with 3 or more trifoliates, consider adding to the stand with an earlier maturity variety within the same maturity group if practical.
- If stand is less than 50K to 60K, consider tillage or herbicides to remove the old stand and start over. Ignite or Gramoxone Inteon work pretty well to kill small RR soybeans with one or two trifoliates.

Estimating soybean plant populations can be done using two methods. Regardless of the method used, make counts in areas that are truly representative of the field.

Method 1. Hula Hoop Method: works great for drilled beans; check 4-5 locations per field.

Table 1. Hula-hoop method for determining drilled soybean populations.

No. of Plants	Inside Diameter of Hula Hoop				
	30"	32"	34"	36"	38"
	(Plants in 1,000's per acre)*				
6	53	47	41	37	33
10	89	78	69	62	55
14	124	109	97	86	77
18	160	140	124	111	100
22	196	172	152	136	122
26	231	203	179	160	144

* Plants/acre = no. plants ÷ (3.14 * r² ÷ 43,560 ft²) where r = radius of hula hoop in feet.

Method 2. Count Number of Plants in 1/1000th of an Acre (also works for corn and other crops):

- Works well for planter seeded rows and is pretty accurate; Number counted x 1000 will give per acre population; Make 4-5 counts per field.
- 7 inch rows = count number of plants in 74' 8 inches of row (reconsider the hula hoop for easier estimating drilled bean populations).
- 15 inch rows = 34' 10 inches
- 20 inch rows = 26' 2 inches
- 30 inch rows = 17' 5 inches
- 36 inch rows = 14' 6 inches

Farm Management (Chuck Danhower, Area Specialist - Farm Management)

Soybean planting has been slow as only 11% of the Tennessee crop was planted as of May 31. This compares to 27% in 2008 and the 5 year average of 43%. It is no doubt that planters have been rolling this week as producers struggle to catch up. It is generally recognized that soybeans planted after the June 15 – 20 period suffer a drop in yield potential. This, of course, depends on how the production year unfolds from planting to harvest. Nevertheless, the timeliness of planting is critical for maximizing yield potential.

Full season soybeans are usually able to get planted before June 15; it is the double crop soybeans behind wheat that we have difficulty getting planted during the optimum window. Wheat acreage was cut back this year, but there still was 380,000 acres of wheat planted. Based on past year's data, producers should harvest anywhere from 235,000 to 315,000 acres. This leads me to these observations. To get double crop soybeans planted as timely as possible, some producers should

consider: 1) Having their wheat custom combined or 2) Having their double crop soybeans custom planted.

First, the wheat will have to be combined before soybeans can be planted. Based on the assumptions in the UT budgets, the variable & fixed cost for combining is \$27.31 acre (combine only). If a grain cart is running about ½ the time the combine is, the cart would add \$6.63 acre or about \$34 acre for both. The latest custom rate guide I have found is from Iowa State and it lists an average for combining small grains as \$26.50 acre and using a grain cart at \$5 acre. Using GPS and yield mapping would add another \$2.10 acre for a total of \$33.60 acre. At current soybean prices, this would cost slightly over 3 bushels of soybeans to possibly expedite wheat harvest to allow quicker planting of double crop soybeans

The second issue is custom planting of soybeans. In IPM newsletter #5, I covered custom planting costs and would summarizing those for soybeans as ranging from \$10 acre (just to cover costs) to \$15 acre (custom no-till planting). At current prices, the cost is around 1 to 1 ½ bushel of soybeans. I think that would be well worth it to help insure timely planting.

In summary, producers should strive to get their double crop soybeans planted as timely as possible. If this looks to be an issue, then either custom wheat harvest or custom planting should be considered as a cost effective way to accomplish the goal.

On-line information:

UT Extension Budgets - <http://economics.ag.utk.edu/budgets.html>

Iowa State Custom Rates - <http://www.extension.iastate.edu/Publications/FM1698.pdf>

IPM Newsletters - www.utcrops.com

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 5, Ending 6-03-09)

Trap Location	Tobacco Budworm	Corn Earworm (Bollworm)	Beet Armyworm	Trap Location	Southwestern Corn Borer
Hardeman (Bolivar)	0	2	0	Fayette (Somerville)	3
Fayette (Whiteville)	0	17	---	Tipton (Covington)	1
Fayette (Somerville)	0	2	0	Madison (WTREC)	36
Shelby (Millington)	4	6	0	Crockett (Maury C.)	1
Tipton (Covington)	14	6	---	Gibson (MREC)	84
Tipton (North)	9	5	0	Obion (Midway)	12
Lauderdale (Goldust)	*	*	*	Obion (Crockett)	*
Haywood (West)	1	0	0	Obion (Union City)	2
Haywood (Brownsville)	0	1	---	Obion (Obion)	29
Madison (WTREC)	3	0	0	Lake (Cottonwood)	6
Madison (North)	2	3	1	Lake (Croanville)	12
Crockett (Alamo)	0	2	0	Lake (New Markham)	18
Crockett (Maury City)	4	6	0	Haywood (B'ville)	*
Dyer (Dyersburg)	0	2	0	Haywood (Hwy 19)	*
Dyer (Newbern)	0	3	0	Giles (Tarpley Shop)	*
Lake (Ridgley)	4	Another Stolen	0	Dyer (Newbern)	0
Gibson (Kenton)	4	15	1	Dyer (Craig Rd)	37
Gibson (Milan REC)	6	5	2	Dyer (Hwy 104 E)	29
Carroll (Coleman Farm)	6	11	0	Dyer (Parker Rd)	145
				Lincoln (Molino)	6
				Lincoln (Camargo)	8
				Lincoln (Meridianvil.)	0

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

The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color, national origin, sex religion, disability or veteran status and is an Equal Opportunity Employer. COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS. The University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating in furtherance of Acts of May 8 and June 30, 1914. Agricultural Extension Service, Tim Cross, Dean.

DISCLAIMER STATEMENT

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label takes precedence over the recommendations found in this publication. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), The University of Tennessee, The Institute of Agriculture and the University of Tennessee Extension assume no liability resulting from the use of these recommendations.

Scott D. Stewart (editor)
Extension IPM Specialist

