

# Mississippi Crop Situation

August 8, 2008

Mississippi State University Extension Service

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## This Weeks Planting Report

### National Agriculture Statistics Services (Mississippi) Crop Progress for Week Ending 8/03/08

Crop	This Week	Last Week	Last Year	5- Year Average
Corn Dough	99	97	99	97
Corn Dent	90	78	93	84
Corn Mature	36	13	46	33
Cotton Setting Bolls	93	81	94	93
Peanuts Pegging	100	99	96	--
Sorghum Heading	94	92	100	99
Sorghum Coloring	61	55	51	72
Soybeans Setting Pods	89	86	94	94
Soybeans Turning Color	4	1	15	24
Sweet Potatoes Planted	100	99	100	100

## Soybean Insects

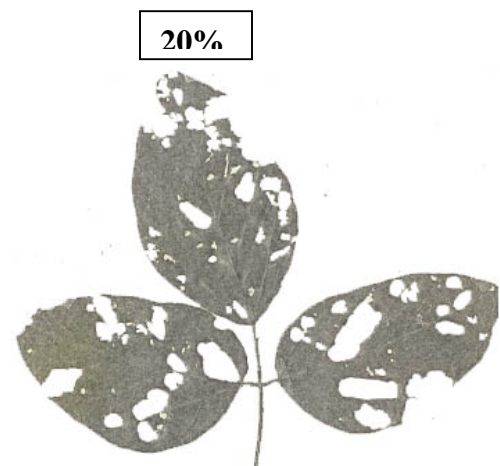
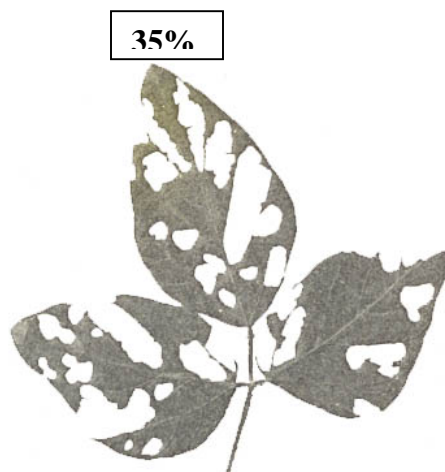
### Angus Catchot

**Bean Leaf Beetle Control:** Control of bean leaf beetle has been the number one call in soybeans this year to date. As mentioned in earlier newsletters we continue to see tolerance to pyrethroids in Dr. Fred Musser's resistance monitoring program for bean leaf beetles and also complaints from the field where straight pyrethroids were used. We have had many reports of numbers as high as 150-250 per 25 sweeps. The level of tolerance varies greatly depending on location. However it seems certain that selection is going on since resistance ratios increase after exposure to pyrethroid applications in most cases. Currently, the delta region of the state is where resistance ratios are the highest.

**Brief Biology:** Bean leaf beetles overwinter as adults in debris or wooded areas and begin to move out of over wintering areas in the spring. When mated females begin to move into soybean fields, each female lays between 130-250 eggs in the upper 1.5" of soil near plant stems. As the eggs hatch in 5-7 days, the small larvae feed on roots and nitrogen fixing nodules on the soybean plants. They then pupate in earthen cells and emerge as adults. In northern latitudes there are 2 generations per year and 3 generations in some of the southern latitudes. Many of you remember a time just a few short years ago where even the lowest rates of pyrethroids would zero a field out. With poor field control that we have experienced in MS over the last 4 years and the number of eggs each individual female lays, it is easy to see how we can get some the really high numbers we are experiencing in some areas of the delta region.

**Thresholds:** Defoliation by adults is the primary concern for us in soybeans. Prior to flowering we use a defoliation threshold of 35% and after R1 (first flower) we use a threshold of 20% defoliation or 2 beetles per individual sweep (50/25 sweeps). Also, bean leaf beetles can and will often move down and feed on pods. Pod feeding thresholds are when 50% of plants have pod feeding on one or more pods. Pod feeding can lead to increased moisture content and also creates avenues for late season disease to set in.

One of the biggest problems that we have is accurately estimating defoliation levels in soybeans. Nearly everyone grossly overestimates defoliation levels. Below are actual soybean trifoliates scanned on the computer of a 35% and 20% defoliation level. Also, keep in mind that when making defoliation estimations you should average across the whole plant. Not just the top one or two trifoliates. This is an important consideration when making a decision to treat bean leaf beetle since they usually always feed in the top of the plant first.



**Pod feeding by bean leaf beetles**

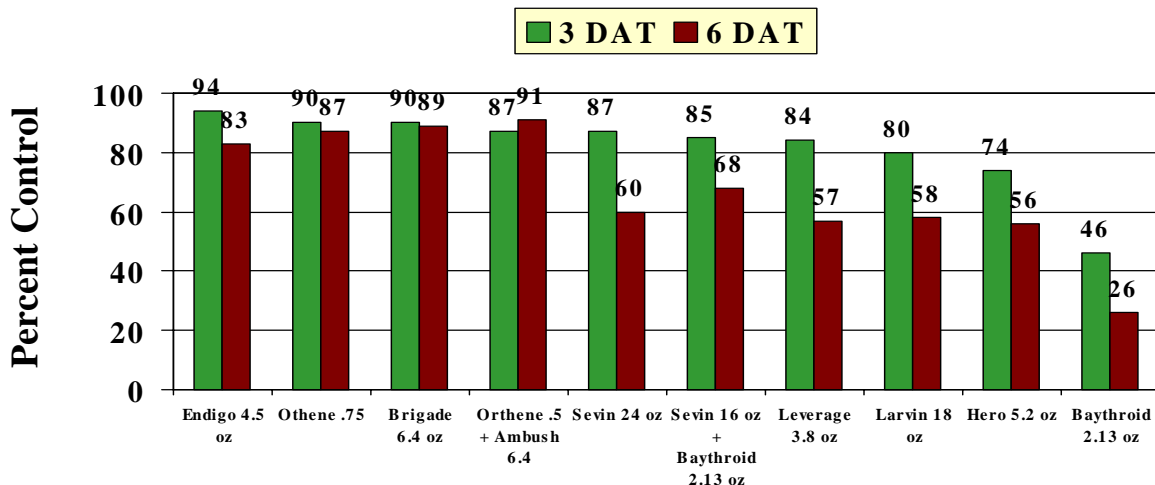


**From 0 to 20% Defoliation:** One of the questions I often get is “How long can I ride this population before I reach 20% defoliation?” Or “If I walk away from this 20-30/25 sweeps count, when I come back next week am I going to be way over?” In short, no one can be exact on that, however, last year we had a field of wheat beans that a consultant put us on in Shelby, MS. These beans were mid thigh high and we caught a population moving into this field perfectly from some group 4 beans that were drying down all around them. When we arrived at the field we had only 2-3% defoliation with number averaging 150 beetles/25 sweeps. In this situation it took a little over 10 days for a 3X threshold to reach 20% defoliation. Of course this is just our observations and the size of the beans and the numbers of beetles can alter this significantly. Bottom line is, with bean leaf beetles you will not go from nothing to completely out of control with sub-threshold levels if you wait till your next check to make a decision.

**Where do we go from here:** Over the last 3 weeks over 90% of all the soybean calls I have had are centered around bean leaf beetles and lack of control. Below you will see a series of graphs that show efficacy trial results over the last two years on bean leaf beetles. What I want you to pay close attention to is the difference in results from 2-3 days after application to 6-7 days after application. With our late July and August populations of bean leaf beetles in the MS delta region, we are constantly getting reinfestation of treated fields from other bean fields that are drying down in the area. With most all the products we use soybeans we just do not have the residual control to handle constant reinfestations into these fields out to 6 and 7 days and the graphs below show this clearly in some of the locations. This is where the problem occurs in evaluating the effects of treatments. Almost all the soybeans that are scouted in our state are on once per week checks, and this is certainly enough for soybeans. However, if you are walking into a field 6-7 days out and there is reinfestation occurring, your perception of control will be very poor in some instances where in fact what you are not seeing is actually acceptable control 2-3 days after the application was made. If you are in a problem area, if at all possible make a quick stop back in 2-3 days out if you are in the area to properly evaluate how your treatment worked.

## Efficacy of Foliar Insecticides on Bean Leaf Beetles

Drew, MS 2008



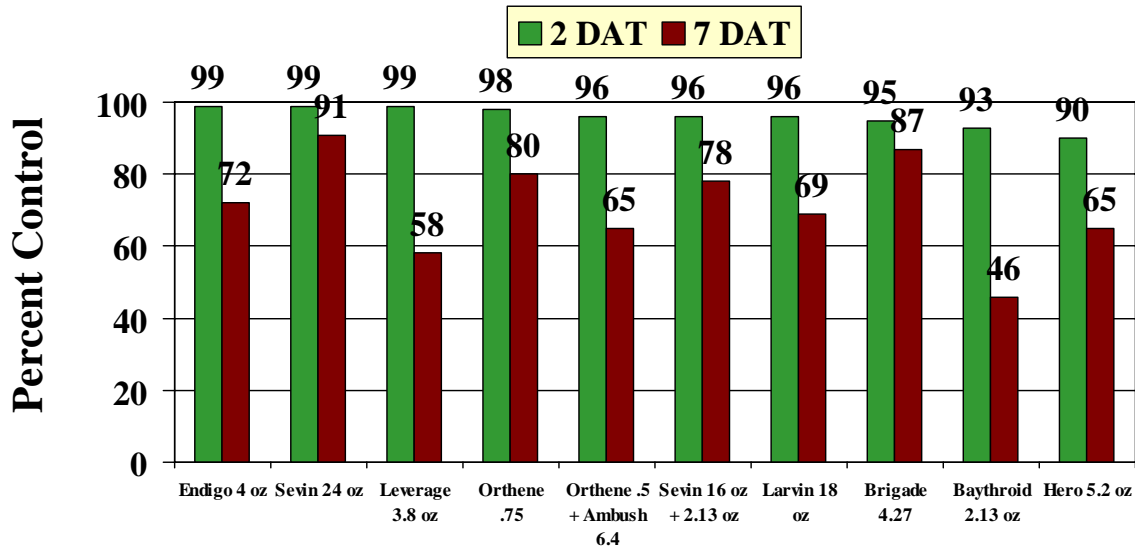
**Check 3 DAT 85.3/25 Sweeps**

**Check 6 DAT 84.5/25 Sweeps**

**\*Rain within 48 hours**

# Efficacy of Foliar Insecticides on Bean Leaf Beetles

Silver City, MS 2008



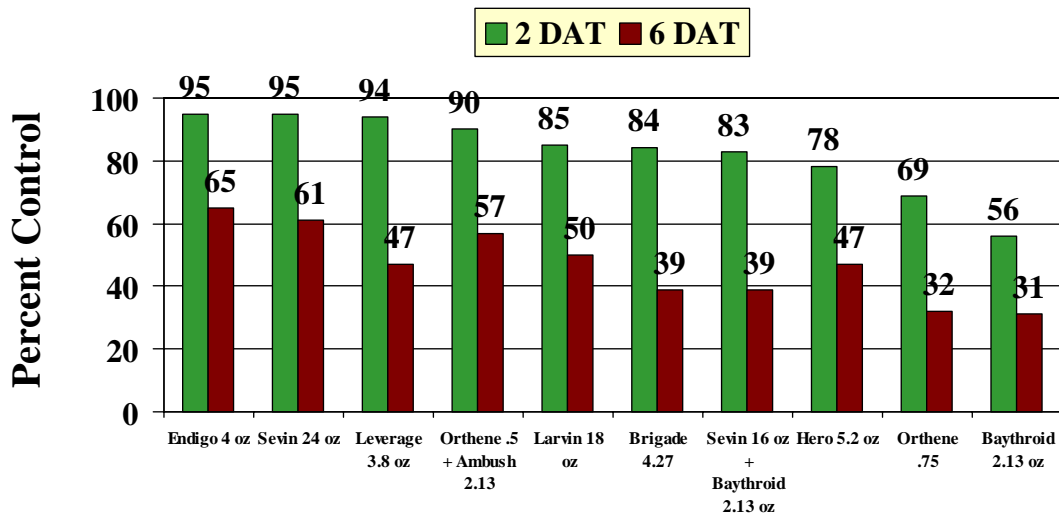
Check 2 DAT 56/25 Sweeps

\*Rain within 72 hours

Check 7 DAT 39.5/25 Sweeps

# Efficacy of Foliar Insecticides on Bean Leaf Beetles

Shelby, MS 2008

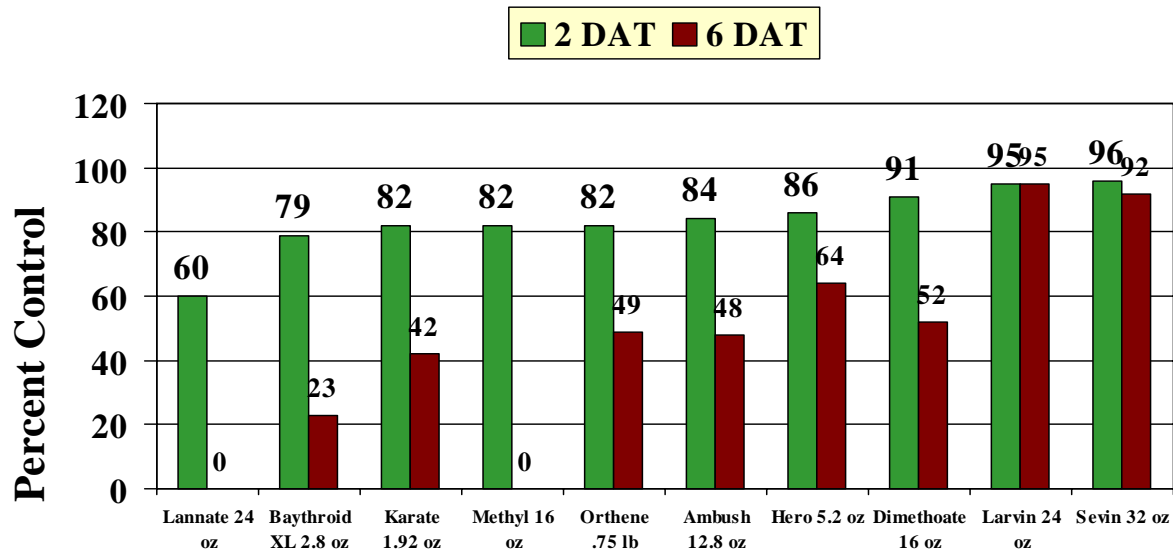


Check 2 DAT 28/25 Sweeps

Check 6 DAT 115/25 Sweeps

# Bean Leaf Beetle Efficacy Test

Shelby, MS 2007

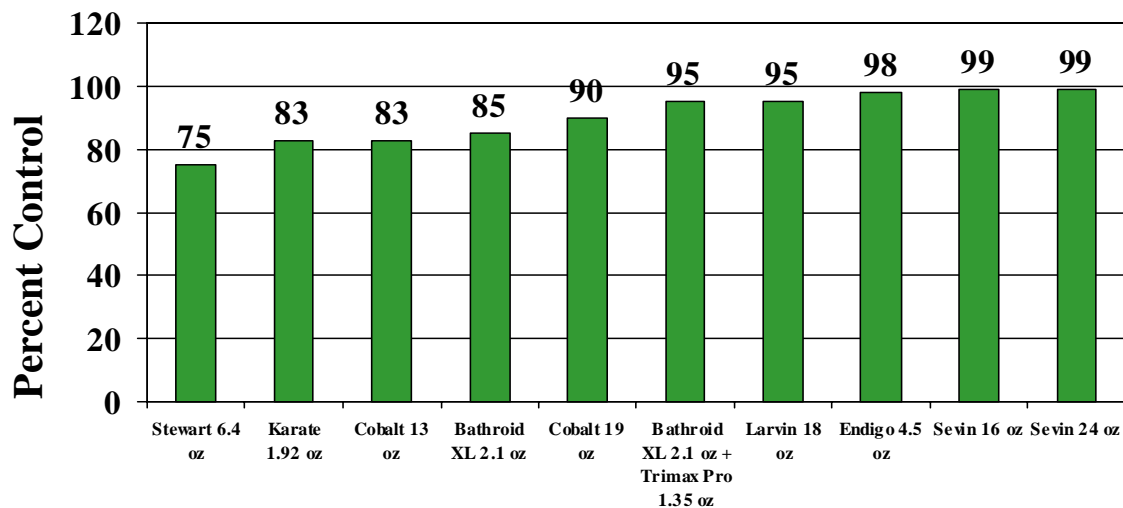


Check = 146/25 Sweeps

Check = 43/25 Sweeps

# Bean Leaf Beetle Efficacy Test

Tchula, MS 2007 - 2 DAT



Check = 43.8/25 Sweeps

\*We did not have a rating later than 2 DAT on the 2007 Tchula, MS test.

## Cotton Insects

### Angus Catchot and Dr. Jeff Gore

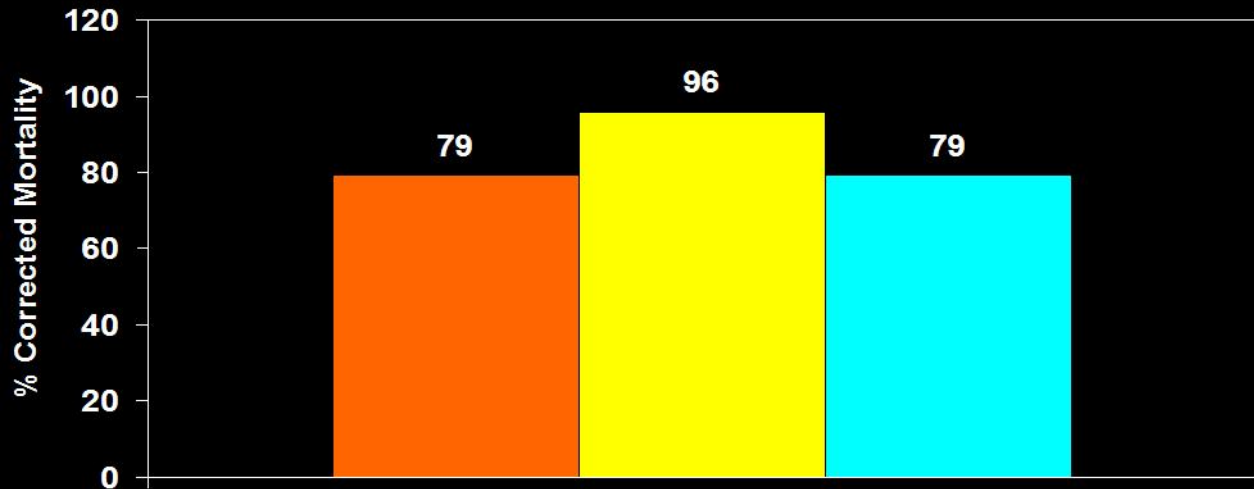
**Bollworms:** We have had some of our bigger and more persistent egg lays in cotton this year across the state than I have seen in recent years. We expected this last year with the corn acres we had but due to good planting conditions in 2007 we got most of the corn crop in the ground early and quickly. Turns out we were in between bollworm populations when the vast majority of the corn was silking and when the moths emerged to infest corn last year they found brown silks for the most part and we never saw the big numbers we were expecting. However, this year is a different story. Due to spring rains the corn crop is spread out widely across the state and there was no way we could get lucky enough to miss the big populations like last year and we have been seeing that now for the last couple of weeks with heavy egg lays that have been sustained.

With the transition to two gene products like Bollgard II and WideStrike, people are always asking, “How are the two gene traits holding up?”. For the most part they seem to be doing exactly as we have expected them to do based on numerous years of testing prior to commercialization and several years of observations and testing on larger acres since then. Often people will try to link performance or, lack there of, to the number of pyrethroid sprays. In the MS delta we are in somewhat of different environment than other regions and this comparison can be misleading. To date we have treated quite a few acres of two gene products with pyrethroids and in some cases more than once. The part that is often left out is the reason behind it. With the extremely high numbers of tarnished plant bugs in the MS delta each year growers and consultants are often forced into tank mix situations to aid in the control of tarnished plant bugs. Last year it was very apparent that tank mixes of plant bug materials with pyrethroids were improving control considerably. This has become commonplace in the delta even in the absence of worms. Then you get into a year like this year and in some cases you have 100% egg lays in fields and you’re going after plant bugs, so the decision to put the pyrethroid in with the plant bug material is that much easier. Keep in mind it’s the plant bugs that are driving the decision and the pyrethroid would have been applied anyway in most situations but it is often perceived as a “plant bug/worm” application since there are high numbers of eggs and 1 day old worms in the field. Also, from a Bt resistance management standpoint it could delay the onset of resistance in the two gene cottons since the refuge is an unsprayed non-cotton refuge (natural refuge). A resistant moth that could potentially come out of the two-gene cotton is taken out by the pyrethroid while the natural refuge continues to produce susceptible moths. Because there are fewer resistant moths in relation to susceptible moths, the onset of resistance is delayed according to Dr. Mike Caprio. Will you ever have to treat for worms in these two gene cottons? The answer is absolutely yes, but only on occasion. I have certainly seen fields that were legitimately at or above threshold and required treatment, but the frequency to treat is no comparison to single gene Bollgard cotton. Remember that the larva has to eat to take up the toxin. One and two day old bollworms being found does not mean the product is not working.

The graph below shows results from a cage test that Dr. Jeff Gore conducted last year at Stoneville. The graph shows the increased efficacy of acephate with the addition of a pyrethroid insecticide. We have seen similar results with other plant bug materials mixed with other pyrethroids as well.

# Plant Bug Cage Test – 48 HAT

■ Orthene (0.75 lb) ■ Orthene (0.75 lb) + Ammo (5 oz) ■ Ammo (5 oz)



Control Mortality = 30%

## NE MS Pest Update

### Dr. Don Cook

Soybean insects are highly variable from field to field. Therefore it is extremely important to scout fields to identify those that have insect infestations that warrant treatment. Mostly what we have seen lately are three-cornered alfalfa hoppers and stink bugs. Some fields have low numbers of green cloverworms and loopers.

Cotton insects have been fairly low lately. However, we are starting to find stink bug/plant bug damaged bolls in many fields. The picture below to the left shows internal injury from stink bugs/plant bugs on the boll wall. Bottom right picture show damage to seed and lint from stink bug/plant bug feeding.



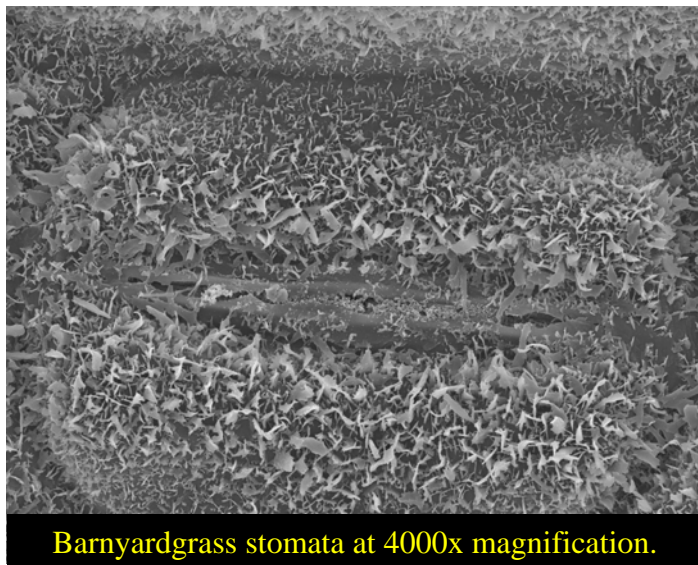
## Cotton Agronomics

**Dr. Darrin Dodds**

**Crop Update:** Based on USDA estimates, 66% of the crop is in good to excellent condition while 93% of the crop is setting bolls. Although we have received rainfall recently, the effect of the prolonged period of dry weather is evident, especially in the dryland crop. Several calls have been received this week of premature defoliation in selected areas. From the symptoms being described, I suspect that this defoliation is due to a combination of the weather conditions as well as disease pressure. In many cases, there is very little that can be done to stop this defoliation and if fruit are already set on the plant, often times no yield loss will be observed. Speaking with several growers and consultants this week, much of the dryland crop is at, or approaching cutout. Based on conversations with several folks this week, it appears that the dryland crop may be harvested in what would be considered a “normal” timeframe even though it was planted somewhat later than normal. Irrigated cotton generally has about four to seven nodes above white flower. Please see the table below in regard to growth and development of cotton in verification program fields. Yield potential appears to be as good, or better, than average; however, yields may not be as good as last year. As with anything, there are areas of the state that yields will be worse than last year and areas of the state where yields will be better than last year.

\* Variability in plant height and total number of nodes is due to heights and counts taken at random locations in the field each week.

**High Temperature Effects on Cotton:** As we all know, extremely high temperatures, especially at night, can be detrimental to cotton. There are several factors that affect how hot



cotton plant tissue will actually get including: air temperature, sunlight, soil moisture, relative humidity, and air movement. The optimum range for growth and photosynthesis of a cotton plant is between 74°F and 90°F. Microscopic openings in the leaves called stomata will open when air temperature and sunlight warm the plant. Stomatal opening allows for water to evaporate from the plant providing a cooling effect. Well watered cotton will often be up to 10°F cooler than the air temperature on a hot, dry afternoon. Generally speaking, nearly all of the water taken up by a cotton plant will be

used to evaporatively cool the plant.

High nighttime temperatures are detrimental to cotton in irrigated and dryland conditions.

Location	Height		# Nodes		NAWF		Internode Length	
	This Week	Last Week	This Week	Last Week	This Week	Last Week	This Week	Last Week
Greenwood	38.4	38.4	17.3	15.6	3.3	3.6	2.5	3.1
Holly Ridge	48.4	43.1	17.4	15.8	5.3	6.3	3.5	4.0
Inverness	45.4	39.5	20.2	19.1	4.4	4.3	2.4	2.7
Inverness	53.6	44.4	19.3	16.8	5.6	6.0	3.1	3.3
Minter City*	35.3	38.4	16.2	16.8	3.9	4.2	2.4	2.8

Nighttime temperatures above 80°F at peak bloom can lead to shed of many small bolls. At peak bloom, carbohydrate demand to fill developing bolls is high. High nighttime temperatures reduce the amount of carbohydrates available to fill developing bolls due to high nighttime respiration. Due to this reduction in carbohydrates, fewer seeds are set per boll and small bolls will be shed. About four to five-days after high temperatures begin mid- to late-bloom cotton will begin to shed small bolls. If temperature stress continues, larger bolls may be shed. Reduction in overall boll set may also be observed due to high nighttime temperatures.

High daytime temperatures may be good or bad for cotton yield depending on the stage of crop development and the amount of soil moisture that is available. Cotton can tolerate a wide range of daytime temperatures; well watered cotton will produce rapid growth even with daytime air temperatures approaching and/or exceeding 100°F. However, when moisture is lacking, high temperatures can lead to a reduction in photosynthesis and in turn, a shortage of carbohydrates available to fill bolls. This generally results in boll shed, small boll size, and leaf damage. Cotton grown in soils without adequate moisture is most sensitive to high daytime air temperatures during bloom. Increased air temperatures prior to bloom can be beneficial as the water use is generally low during this time and roots are still expanding into unexplored soil. Additionally, these high temperatures prior to bloom can accelerate the onset of bloom. Increased air temperatures at bloom may decrease the time to boll maturation and boll opening. Cotton subjected to high temperatures may produce fiber that will have increased micronaire. Increased micronaire is due to thicker cellulose rings being deposited in the fiber.

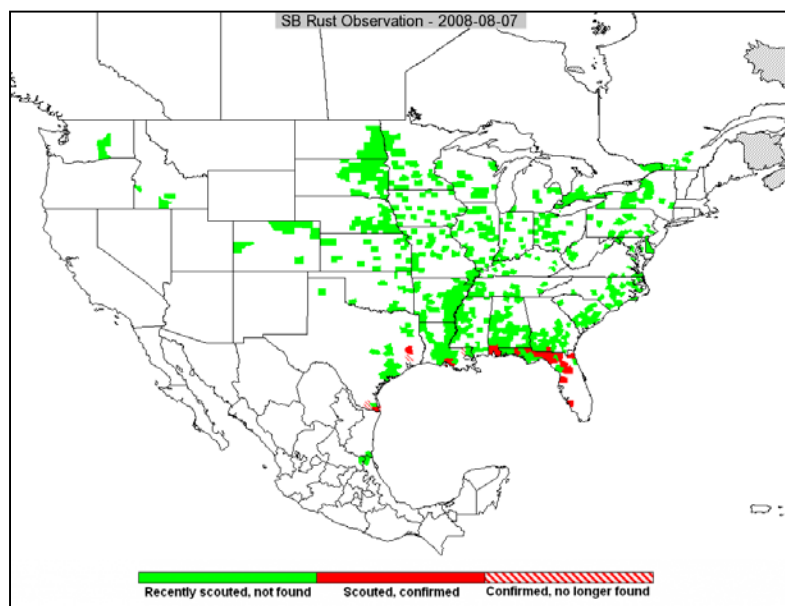
When temperatures are high, it is important to keep the level of soil moisture available to the plant high. Irrigation applications that saturate the soil should be avoided. Soil that is saturated with water will have a lack of oxygen causing the cotton to wilt and die rapidly during warm conditions. Fields that are deprived of water may suffer from boll shed, a reduction in the total number of main stem nodes, reduced leaf size, and premature leaf senescence. Timing of the final irrigation depends on the type of irrigations system being employed. Pivot irrigation that provides one inch of water per irrigation or less should be terminated about one to two weeks after first open boll. Furrow irrigation generally supplies greater amounts of water to the crop compared to pivot irrigation. As a result, furrow irrigation should be terminated at or just prior to first boll crack. Irrigation applied later than recommended may lead to problems with boll rot and/or delayed harvest depending on weather conditions.

## Soybean Rust Update

**Drs. Tom Allen, Malcolm Broom, Andy Milling, Trey Koger, and Billy Moore**

The Mississippi State University Soybean Rust Team continues to scout for soybean rust in sentinel plots, kudzu patches and commercial soybean fields. Currently, the 18 remaining early planted sentinel plots that contain four different maturity groups (an early MG IV, late MG IV, MG V, and a MG VI) range in maturity from V4 (a deer damaged plot along the MS – LA border in Walthall County) through R7 in the sentinel plot at the South Mississippi Branch Experiment Station in Poplarville. In addition to serving as a monitoring source for soybean rust, the sentinel plot in George County was recently used by law enforcement to trap, stop and arrest a local drug dealer.

While we have **NOT** detected soybean rust within the borders of Mississippi, I thought I'd take some time to update the situation that is occurring in other states. I'll cover our adjacent neighbors first, and then FL, GA, and TX, finishing with some MS scouting statistics from 2008.



**Alabama** – To date, AL has two positive counties. Mobile County has one urban location, in an abandoned building where infected kudzu continues to grow. This particular location had infected kudzu destroyed in April at my request but the kudzu has become re-infected. However, the infection is light and we believe there has been little (if any) spread from the sporulating kudzu. The infection also doesn't seem to be spreading within the kudzu patch. Neighboring Baldwin County has an infected soybean sentinel plot. This

infection was identified on July 25. A collection of 200 leaves was sampled from the sentinel plot and a very low level of infection (less than 1% of the leaf area) was found to have rust pustules on 2 leaves from the collection. This is a 1% level of infection. Additionally, AL mentioned that this sentinel plot location in Baldwin County has traditionally been found to be infected in June. The identification of this infection comes approximately 30 days later than normal. Soybean acreage in AL increased this year to 350,000 acres, up a little more than 100,000 acres. The crop in AL ranges from early-to-mid vegetative growth stages to a few locations at pod fill. Most of AL has been hot and dry this year, however, areas along the coast that include Baldwin and Mobile counties have received more frequent afternoon showers over the past month.

**Louisiana** – LA has identified two kudzu patches in two adjacent parishes. The two kudzu patches are approximately 5 miles from one another but reside in Iberia Parish, and St. Mary Parish and are both very close to Jeanerette, LA. Geographically speaking both parishes are west of New Orleans. Both kudzu patches have VERY low levels of infection (less than 2% incidence of the disease and severity (number of pustules on the leaves)). LA continues to scout and has not been able to find any notable spread of the disease within either kudzu patch, nor to other patches along the road where these two patches occur. Additionally, soybean rust infected soybeans have NOT been identified in LA. The soybean crop in LA ranges from late vegetative to R5, however, the information I have access to is a couple of weeks old. Sentinel plots are at the same stages of maturity. Much like AL, the weather has been hot and dry throughout most of the state but there have been scattered, afternoon showers across the southern areas of LA. The infection in Iberia Parish was identified on May 29. While this particular parish had infected kudzu in January, cold weather killed the kudzu sometime between January and May. Specific dates are not available. However, if we compare 2008 to 2007, infected kudzu was identified in Iberia Parish 18 days earlier on May 11 in 2007.

**Texas** – The first find of the 2008 season really occurred in Polk County, TX. As plant pathologists we have struggled to determine if soybean rust overwinters within the U.S. That was answered in 2008 when TX found fungal structures (telia) on kudzu leaves that prove the fungus could overwinter in areas of TX that are subject to receiving winter freezes. Kudzu leaf collections had also been made in 2005 and 2006 from this particular location but were only recently compared with 2008 collections and it was determined that all three years contained

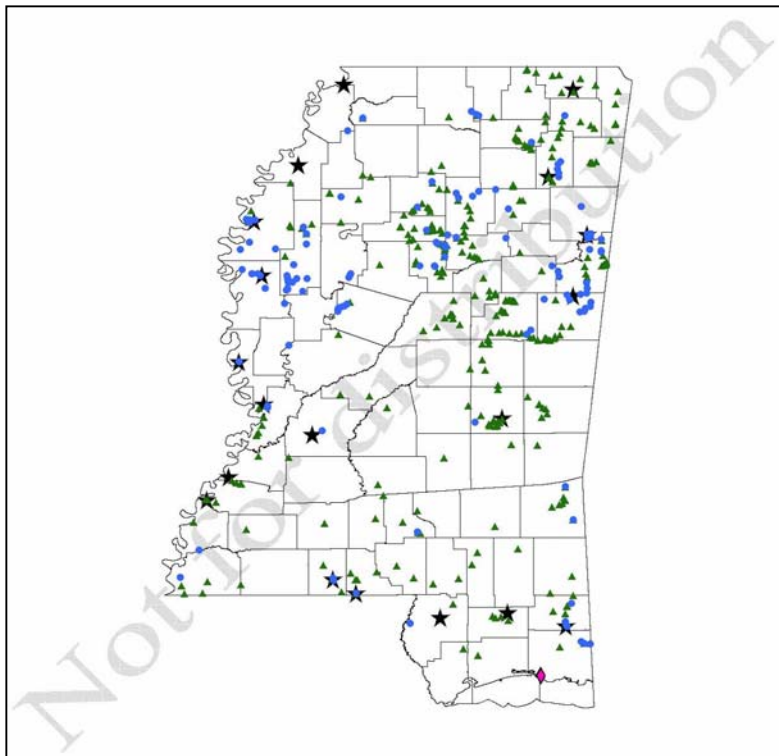
telia and teliospores of the soybean rust fungus. However, it is still believed that the fungus requires a living host with green leaf tissue to overwinter. Polk County, which is north and east of Houston was the first identified TX location with soybean rust. Rust was initially detected at this location on January 5 but was defoliated following a freeze. Scouting conducted at this location on March 22 failed to find rust. However, on April 21, rust was again detected at this location. Soybean rust hasn't increased much since identified in April, nor has rust spread to adjacent kudzu locations along this road. VERY low levels of infection are still present at this site and most of the infected leaves are sheltered within the kudzu canopy.

On August 2, a second report of soybean rust in Cameron County, TX was issued. Commercial soybeans in two fields southeast of Brownsville, TX, along the border with Mexico, were found to be infected with soybean rust. The heavy rains that occurred in south TX during Hurricane Dolly around July 4 are believed to be the source of infection. Incidence of soybean rust in the two fields is probably the highest of any of the infected sites in the U.S. at this time. Incidence of soybean rust was 75% (on the 100 leaves collected from each field) and some leaves contained approximately 200 pustules. The soybean crop in TX ranges in maturity from seedlings to R8. Some of the earlier planted fields have been harvested. In addition, there will be late planted soybeans in the Rio Grande Valley, around Brownsville, that will be planted in the coming weeks and harvested this winter. Much like the rest of the states in the south this year, TX has been dry throughout most of the state and the rains from Hurricane Dolly were some of the first received in the Rio Grande Valley this season.

**Georgia** – A single rust infected soybean field in south, central GA in Brooks County was identified July 9. This was a light infection with only 5 of 58 leaves infected. The severity of rust on infected leaves was also very low with only 1% or less of the leaf area affected. However, the location where rust was identified is a private research farm that implements practices to invite/increase disease (primarily soybean rust) incidence. The soybeans in question are MG VI (not typical for southern GA), were planted in April and are heavily irrigated at least 3 times a week to increase humidity and promote the incidence of soybean rust. Infected soybeans were at the R3-R4 growth stage. Given the proximity of the majority of the GA soybean crop to infected sites in FL it is very interesting to note that soybean rust has not progressed into GA and there is only a single infected field in one county in south GA.

**Florida** – Sixteen FL counties have been found to be infected with soybean rust. The two most recent finds were in Columbia and Madison counties on July 20. Both locations reported infections on MG V soybeans at R4. Several of the infected counties border southern Georgia and run along the northern Florida panhandle. Five counties have reported soybean rust in soybean sentinel plots. Each of these counties is reporting a VERY light level of infection with less than 5% found in the sentinel plots, and in most cases, a single rust pustule was identified on one soybean leaf from a collection of 100 leaves. Ten counties have reported rust on kudzu and a single county is positive based on the identification of soybean rust on the new host, coral bean. Additionally, two of the positive counties have soybean rust on both kudzu and soybeans. Florida has also continued to conduct outdoor inoculation work in Gadsden County with soybean rust spores on soybeans as was indicated in a news story in the July 11<sup>th</sup> issue of Mid-South Farmer. This work has been conducted for the past three seasons at the North Central Florida Research Center in Quincy, FL.

One thing I do want to point out. If you read the commentary at the bottom of the [www.sbrusa.net](http://www.sbrusa.net) page, there has been a reported soybean rust infected kudzu site in MS in 2008. However, this location was identified in January and the kudzu only survived 5 days following the initial detection. We have **NOT** found rust since that kudzu was defoliated due to a freeze event and we are continuing to scout. Based on our hot dry weather throughout much of the



soybean growing season we believe that the full-season, early planted soybeans are now out of the woods when it comes to a yield loss situation occurring due to soybean rust. But, our commercial soybean crop ranges from V4, and in at least two reported cases emerging soybeans, through R8 which means we have a ways to go on some of the double-crop soybeans. To date we have scouted 461 unique locations. Each of these locations has been scouted at least a single time. I've included a map of the locations that we have scouted throughout the state. In addition to the 18 statewide sentinel plots (indicated on the map by black stars) that we

scout on a weekly basis we have scouted 340 kudzu patches (green triangles), 7 coral bean sites near Ocean Springs, MS (a new host as indicated by The University of Florida and indicated by pink diamonds), and 132 commercial soybean fields (blue circles). As we continue to scout across the state the map will fill out and we will keep you posted on our progress and whether or not we find rust. Stay tuned to the public website (still reachable at [www.sbrusa.net](http://www.sbrusa.net)) and also the soybean rust hotline (1-866-641-1847).

To wrap up this discussion I think it's important to make some comparisons between the last three years and more specifically between 2007 and 2008. To date (January 1 through August 8, 2008) soybean rust has been identified in 24 counties in 6 states. If you compare this total, to the same time period from 2007 there were 62 counties in 8 states. I think that the lack of a major source of inoculum to our south and the change in the weather pattern over the past few months in comparison to 2007 has meant we have not had a favorable set of conditions for soybean rust to develop in MS nor a great number of locations for inoculum to come from. Ideally there are potentially five positive locations (2 in LA, 2 in AL, and 1 in TX) that could impact our soybean acreage but there are several issues that will limit this impact. Firstly, all five locations have VERY low levels of inoculum. Second, these locations are a long distance from the majority of our soybean acres and soybean rust spores die when exposed to UV radiation. This means it is unlikely that living spores will reach soybeans in MS. Third, we aren't receiving much measurable rain across the majority of our soybean acres. In summary, this means we do not have a favorable environment for soybean rust to develop at the present time. For a more historical perspective, in 2007 rust was detected in Wilkinson County on July 12 on kudzu. Following that initial find it was almost another month before the second county had confirmed soybean rust. By the end of 2007 we had identified 26 counties with soybean rust. If we take this comparison back to 2006 rust was first detected in MS in early August. Low levels of

inoculum and continued hot, dry weather throughout much of the state mean that it could be some time before we find soybean rust in MS.

## Corn Agronomics

**Dr. Erick Larson**

**When do you start corn harvest?** – This is a common question that deserves a lot more consideration when both market prices and acreage are high. The answer may vary considerably depending upon the interaction of many factors. The primary factors you need to consider are the number of acres relative to combine/trucking/storage capacity. These factors determine the potential harvest duration and the relative risk associated with harvest delays or complications. Those potential risks include severe lodging and/or grain quality deterioration, which can result from inclimate weather, insect pest damage, and late-season weed growth.

**Figure (1).** Optimum harvest timing varies depending upon your acreage, crop condition, and harvest capacity. However, you should generally strive to finish before corn grain moisture falls substantially below 15%.



**Moisture Dockage** - Corn may be harvested any time after grain reaches physiological maturity, which occurs at around 30% moisture. However, corn may not be safely stored until considerable moisture loss occurs. Thus, grain elevators discount wet corn to account for drying expenses and moisture weight loss during drying. Moisture dockage schedules between elevators may vary significantly, so thoroughly compare rates. Most schedules discount about 2.5-3.0% per each percent moisture above the standard, and may increase as moisture content rises. Water evaporated during drying (shrinkage) accounts for 1.18% of the dockage per each percent moisture. The producer loses this weight regardless of whether they sell wet grain to the elevator, dry it mechanically or let the grain field dry. Thus, a producer should subtract this value from the dockage rate to show their realized or “actual” dockage.

**Harvest Losses** - Harvest losses are just as important as moisture dockage rate in evaluating your harvest timing decision. The longer corn stays in the field, the greater the likelihood of substantial field losses. Factors such as stormy weather and southwestern corn borer damage can

cause considerable lodging in unharvested fields. Late summer rainfall can also promote morningglory growth, which can greatly inhibit harvest efficiency. Each of these factors may cause substantial field loss, which would considerably outweigh moisture savings. Producers should also consider their harvest capability -- the longer it takes to complete harvest, the earlier you should start harvest. Besides harvesting drought-stricken fields promptly, growers should also harvest non-Bt hybrids infested with corn borers, early maturing hybrids or fields, and those possessing below average stalk quality as quickly as possible. Producers should closely check for loss while the combine is harvesting and make adjustments accordingly. Two corn kernels per square foot or one dropped ear per 100 feet of row equals about 1 bushel per acre yield loss. Research generally indicates combine efficiency is best (harvest losses are lowest) when corn grain moisture is about 20-22%. Thus, growers seeking maximum profitability should always strive to finish harvest before grain moisture falls below 15%.

**Don't Give It Away** - If you deliver corn at less than 15% moisture, you are giving away potential profit. If you harvest 200 Bu./A. corn and deliver at 14% moisture, you lose \$11.80 per acre or \$23.60 per acre at 13% moisture (at \$5.00/Bu.). This loss is solely from reduced grain weight due to lower moisture content. This moisture weight loss closely approximates the "actual" dockage most elevators charge for high moisture corn. Thus, since corn harvest losses generally increase the longer the crop is in the field, you should try to harvest most, if not all of your crop, before it falls substantially below 15%.

## Bollworm/Budworm Traps

<b>Pheromone Traps Captures – Don Cook, Chris Daves, and Fred Musser. Week of August 4, 2008.</b>					
County	This week last year Bollworm	Bollworm	This week last year Budworm	Budworm	Beet Armyworm
Calhoun	--	47		7	21
Chickasaw	137	130	20	45	28
Grenada	85	60	0	73	-
Hinds	--	71	9	0	4
Lafayette	--	10	--	1	0
Lee	37	50	17	13	15
Lowndes	171	41	15	1	10
Madison	3	85	8	8	2
Monroe	--	8	--	0	3
Noxubee	30	8	4	2	0
Oktibbeha	--	175	--	0	3
Pontotoc	--	40	--	2	5
Prentiss	16	65	5	24	5
Rankin	--	62	--	16	0
Scott	--	24	--	5	0
Union	49	26	2	2	6
Warren	--	-	--	-	56
Webster	--	37	--	3	3

**Ryan Jackson USDA Trap line**

August 4, 2008

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm
Washington	3	15	5	0
Sharkey	27	76	0	0
Humphreys	37	32	0	0
Yazoo	26	42	1	0
Holmes	46	35	24	0
Leflore	64	63	9	0
Tallahatchie	81	29	10	0
Coahoma	37	62	29	8
Bolivar	35	42	16	0
Sunflower	52	41	7	0

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