

Mississippi Crop Situation

September 12, 2008

Mississippi State University Extension Service

Number 24

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This Weeks Planting Report

National Agriculture Statistics Services (Mississippi) Crop Progress for Week Ending 9/7/08

Crop	This Week	Last Week	Last Year	5- Year Average
Corn Mature	97	93	100	98
Corn Harvested	41	35	81	76
Cotton, Open Bolls	39	25	81	71
Rice Headed	97	95	100	100
Rice Mature	66	40	92	76
Sorghum Coloring	96	95	100	100
Sorghum Mature	74	59	96	97
Sorghum Harvested	27	22	70	72
Soybeans Setting Pods	100	99	100	100
Soybeans Turning Color	67	59	88	86
Soybeans Dropping Leaves	40	29	70	71
Soybeans Harvested	10	5	32	47
Sweet Potatoes Harvested	2	1	21	18

****We will continue to send out newsletter from this point forward on an as needed basis****

Soybean Agronomics

Dr. Trey Koger

Soybean Seed Damage: Extensive and in some cases practically continuous rain over the course of the past several weeks have resulted in widespread and extensive damage to a majority of the states' soybean crop. Extreme rain from the remnants of Hurricane Gustav has caused widespread and severe losses to the soybean crop, particularly in the western 1/3 of the state. A significant amount of our states' soybean acreage was in a late growth stage (R7 – R8) that is extremely vulnerable to seed damage and rot, in particular Phomopsis seed decay and purple seed stain (figure 1) as well as seed sprouting (picture 2).

It is still too early to know the full extent of the damage from the excessive rainfall over the past several weeks. However, preliminary damage numbers for soybean delivered to the elevator have ranged in 0 to 66% damage (i.e. dockage). This tells us the quality of the soybean crop is extremely variable with respect to quality and that there are good soybean being harvested despite recent inclement weather. Average damage numbers have been in the 8 to 15% range. Preliminary estimates from Washington County indicate that average yield losses may be as high as 35% in some cases and may be in excess of 85% in portions of the western 1/3 of the county where the excessive rain amounts from last week were extremely high. Keep in mind these are

preliminary damage estimates. Overall, there are cases of seed damage all across the state, with the most widespread and extensive levels of damage coming from the western portions of Sharkey, Washington, and Bolivar counties due to an extreme rainfall event that occurred in a very short period of time last Wednesday night (Sept. 3rd).



Important: Growers who feel they have received some degree of crop damage (regardless of crop) or crop losses from the recent rains are being asked to contact their local FSA (Farm Service Agency) office and inquire about completing a form entitled CCC576. This form serves as documentation that you feel that your crop has sustained some degree of crop damage or loss from the recent rains. Completing this form will serve as an initial reference in case disaster assistance is possibly made available through the federal

government in the future as a result of the inclement weather we have been dealing with in recent weeks. This is not to say that any disaster assistance will be made available in the future as a result of this wet weather. However, in case any disaster assistance is made available, you have submitted the proper initial documentation necessary.

To end on a positive note, some our soybean crop has benefitted tremendously from the recent wet and cool spell. Late planted soybean and double crop acres look great in most areas of the state as a result of recent rains and cool temperatures. This is especially true for non-irrigated acres that were in poor condition in most areas as a result of extremely dry weather during the months of June and July. We have also been able to cease irrigation on much of this late planted and double crop acreage and have received enough rain to allow us to terminate irrigation in most cases. Additionally, even though we have harvested just over 5% of the states' soybean crop some of the yield numbers coming in have been tremendous with little to no damage. Consistent yields in excess of 55 bushels/Acre have been reported for some of the early planted crop that we harvested to this point. Soybean yields as high as 65 bushels/Acre have been reported for some farms across the state. Not to take light of the dire situation for those whom have taken damage from the recent rains because this is a serious and extremely unfortunate situation, but fortunately the most severe and widespread damage was restricted to the western ¼ of the state and the crop outside of this area fared much better with little to no damage occurring in most places. In most areas of the state where the soybean crop was in a growth stage vulnerable to damage from late rains, some damage has occurred. What everyone is hoping is that this weather pattern will break and we can get a long extended dry spell over the course of the next few months to get this crop harvested and pay our bills.

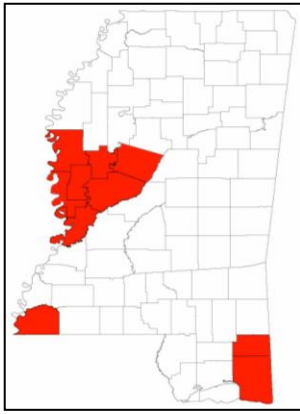
The recent wet weather has many of us second guessing as to whether there was anything we could have done to prevent excessive damage to the soybean crop. Hind sight is 20/20 but no one could have predicted this weather pattern, especially with the excessively dry period most of us went through in June and July. In most cases, nothing could have been done to prevent the damage we have taken. It is simply a function of the weather. Most remember the late wet spell that occurred in 2001, which also resulted in extensive damage and seed rot to the soybean crop. That year, similar this year, was all of a function of the late wet weather.

If you have any questions regarding late fungicide applications, the FSA program and document CCC576, harvest aids, or anything else regarding soybean issues please don't hesitate to call us.

Soybean Rust Update

Dr. Tom Allen, Dr. Billy Moore (Emeritus Extension Plant Pathologist), Dr. Trey Koger (Extension Soybean Specialist), Dr. Malcolm Broome (Retired County Director), Mr. Andy Milling (Retired County Director), and Mr. Jack Bridges (Jimmy Sanders, Inc.)

Over the past week the Mississippi State University Soybean Rust Team has been quite busy. Since Saturday, soybean rust has been positively identified in George, Holmes, Humphreys, Issaquena, Sharkey, Warren, Washington, and Yazoo counties. The current situation with positive counties shown in red is presented to the left. While this may seem to be a little extreme at this time, I don't want anyone to be alarmed. In addition, Arkansas, immediately across the Mississippi River in the Arkansas Delta, has added Ashley, Chicot, Desha, and Drew counties. In Mississippi, all of the locations scouted and identified were soybean fields at R7-R8 in maturity, except for one field in Yazoo County that was at approximately R5.5 with a very light infection on a single leaf. I want to take a minute to talk about why we choose fields that are at



the R7-R8 growth stages. At this point in the season these are excellent fields to scout because they act as a trap for rust spores and any plants/leaves that remain are extra susceptible to the disease. As you can imagine most of these plants don't have many leaves remaining and pustules are easier to find. I've attached some photos of two of the fields where we identified soybean rust this week. In both cases a management option is NOT warranted. Soybeans at the R7-R8 growth stages are done and simply ready to be harvested. When we find rust in one of these locations this simply means that we have received a spore shower and the disease is present. If you remember back to last year this very same thing happened.



Firstly, I want to extend an offer to all of you. If **ANY** of you want to see what soybean rust looks like call me. I have some leaves and I would be more than happy to show anyone what an infected leaf looks like. I have leaves with heavy infection so you can see what the disease looks like and then if you would like I have some leaves that have very low levels of rust. While the photos at left show what the disease looks like in the field, it really isn't this simple to identify. There are a few key characteristics that really take some one-on-one time to present. However, I spent 45 minutes in the field the other day training one person, and the very next morning he called and had found rust in another location and wanted me to confirm it. Once you see the disease and the symptoms on a leaf you will be less likely to confuse soybean rust with another disease.

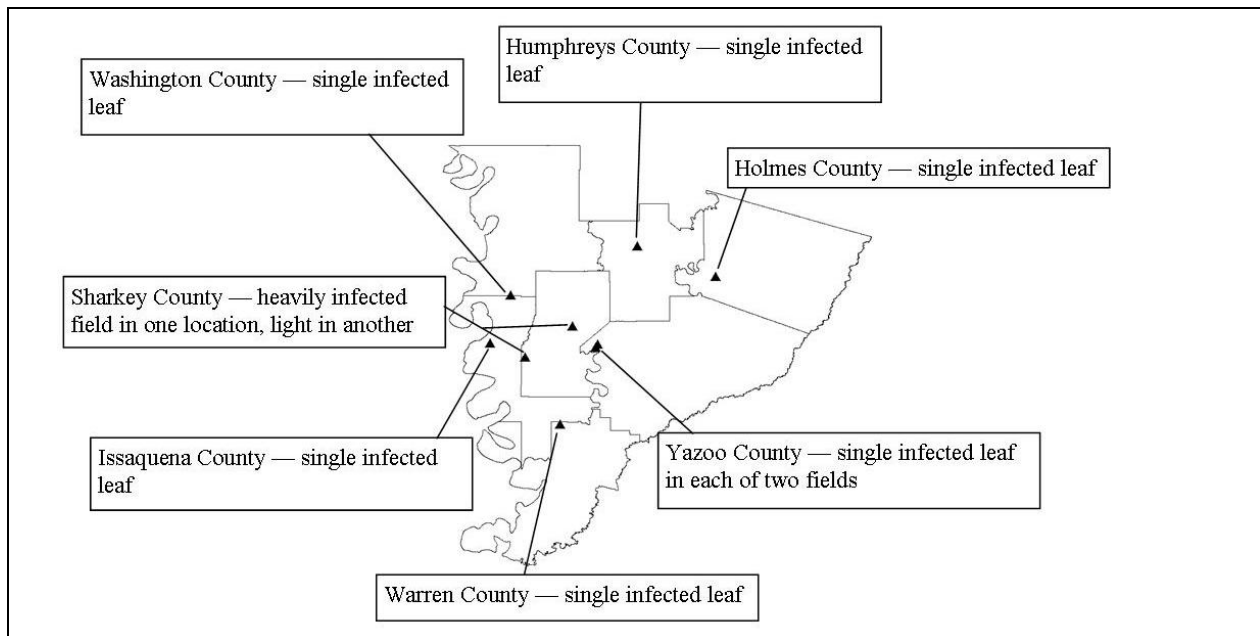


The other thing I want to mention, and this has been a misnomer created by poorly worded media. The best plant pathologist in the world cannot drive by a field that is infected with soybean rust and determine if the disease is present while they are leaning out the window. I've attached three photos from 3-years ago from a commercial field in Foley, Alabama. That is the most beautiful soybean field that Mr. Jack Bridgers ever laid eyes on and it was **HEAVILY** infected with soybean rust. To determine that, the upper canopy had to be peeled back, and you had to get on your hands and knees to find the rust on the lower leaves. I wasn't working with MSU at that time but I've heard stories that you could pull an entire plant up by the roots, shake it and see rust spores falling off the plant. This was a single, extreme case where the disease was allowed to get out of control. So please, don't say that



any yellow spot in a field has been caused by soybean rust. There are many other things that can cause those situations at the field level. You've got to stop, and take time to find rust, in some cases an hour or more of pulling leaves and looking at each leaf carefully. Fields must be scouted intensively to determine the level of rust present. When the rust team scouts, we have the ability to find spots on leaves that contain three pustules (a very light infection and a small lesion). To put this into perspective, the spot with the naked eye is

approximately the size of the period at the end of this sentence. That is the resolution of disease required to turn an entire county red for the national system. So just because a county is red doesn't mean that it is entirely infected with rust, please see the attached map below for more specifics.



The above map shows the geographic distribution of the rust infected fields that have been identified in the Delta. Locations in Holmes, Humphreys, Issaquena, Warren, Washington, and Yazoo counties all had **VERY, VERY** low levels of infection. All locations had a single leaf that we could find with a very light level of infection. Fields ranged in maturity from R7-R8, except one field in Yazoo County where the soybeans were at the R5.5 growth stage. We did **NOT** suggest a fungicide since it will be approximately 2 weeks for this field to reach R6 and this will mean the field is out of the woods with regards to damage caused by soybean rust.

In addition, soybean rust was reported yesterday in an R6.5 soybean field in George County in southeast Mississippi. Again, this field does **NOT** warrant a fungicide application because of it's advanced stage of maturity. This is something that we have spent a lot of time talking about amongst ourselves over the past two seasons. When rust was first identified in the U.S., near Baton Rouge, LA in November 2004, there were numerous reports that suggested rust could cause greater than a 40% yield reduction in the Midsouth. We have **NOT** seen this kind of impact with the disease. In fact, I stand by this statement, we have **NOT** lost a single bushel of

soybeans in MS to soybean rust in the four years we have been dealing with the disease. Now, with that said, I am in no way suggesting that we will never have a year that the disease won't enter the state early and begin to move rapidly. I want each of you to remember that soybean rust can be very explosive (see above photos and statements regarding the Foley, AL field). Given the perfect weather conditions, which are generally considered to be cooler temperatures (in the 70-80° F range) with very high humidity (between 90 and 100%). I will briefly discuss a little bit more of this below.



I have presented each of the Delta County situations on the map but want to discuss one particular field in Sharkey County. The particular soybean field was at R8 maturity (see attached photo of what an R8 soybean looks like, please ignore the other diseases on the pod). Essentially, this field was waiting on the combine, this growth stage is considered full maturity and means that ninety-five percent of the pods have reached their mature pod color which at this point should be brown signifying a mature, dry pod with a harvestable bean. I have also included a photograph of the soybean field. I initially identified this field as containing soybean rust on Sunday and returned on Tuesday to more intensively survey the level of infection. This particular location had some replant areas that remained after the initial harvest approximately 14 days prior to the identification of rust. Six blocks of replant remained in the field and were separated in some cases great distances, probably as much as a football field (if you see the tree line in the distance soybeans are right in front of that). Essentially every leaf that remained on these soybean plants was infected with soybean rust (100% disease incidence). The level of disease (severity) on the underside of the leaf ranged from 5% (fairly light) to approximately 85% (VERY heavy) infection. To be very clear, this infection more than likely (based on the incidence and severity of the disease and the distance between locations) occurred between 6 and 8 weeks ago. I have been in touch with a group from Penn State University that tracks weather patterns and creates models to determine the flow of soybean rust spores. They have indicated that inoculum more than likely came from the south, possibly along the LA coast, and that several large rain events occurred over this location and area between July 7 and July 11. To calm any fears regarding this field, it was harvested on Wednesday evening. While we talked to the farmer on Wednesday morning he indicated this was a non-irrigated field and he cut 52.5 bushels/Acre. I'll say it again, rust did **NOT** cause a yield loss in this situation. However, one interesting thing to note, is he did not make an R3 fungicide application. As a plant pathologist I was more concerned about the level of pod and seed rot that had occurred in the replant situation than I was with soybean rust.

With all of that said, **we are not suggesting a fungicide application at this time.** We will continue to scout to determine the extent of the disease throughout the state, and begin to move into "green" soybeans (younger than R6) to see what the extent of infection is throughout the Delta. Please relax, we will be turning more counties red within the next few weeks, and I will be surprised if LA and AR don't turn more parishes/counties red at some point today. I have been on the phone with extension plant pathologists from LA and they have been dealing with a lot of hurricane clean-up, some of Baton Rouge is still without power. Also, please be aware that this information from late soybean fields (R6.5 through R8) will simply help create more

refined/specific models to determine the movement capabilities of soybean rust. Scouting these locations is also a part of our grant agreement with the USDA-RMA.

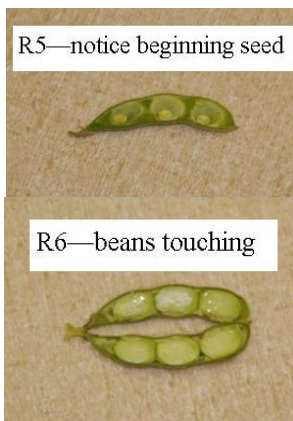
I can only provide you with all of the information that I can on this topic from a field level so that you can make an informed decision. I will say this, we have had perfect conducive conditions for rust to develop over the past 4 weeks. With the recent weather patterns, and increased moisture throughout the state these are very conducive conditions. **However, in another 2 weeks, most of our crop (probably better than 85%) will be at R5.7 (and a little beyond) and thus out of the woods so to speak.**

So, with all of that information presented, lets sit back, relax a little, and I'll keep you posted as to what we find in the coming days. But, I have included some options below that you can consider, or if you would like, pick up the phone and we will discuss your specific situation. Each field needs to be considered a separate entity and we haven't seen rust moving into any younger soybean fields (younger than R5.5). Before you rush to make a fungicide application for any reason there are some important things to consider:

1. growth stage
2. yield potential (in some areas, in fact most areas, I will tell you I'm more concerned about the damage that insects and pod/seed rotting has caused, Trey Koger mentioned we have seen damage that has ranged from 0-66% of the harvested crop in some locations that has been delivered to the elevator and represents dockage)
3. your location - we do have some young acres in parts of Washington County, north of Clarksdale was planted late, the northeastern part of the state, and along the river where soybeans range from R3 around Vicksburg, and south to Natchez. There is also a field in the southern part of the state (Hancock County) near the coast that was planted about 4 weeks ago.

With those specific situations outlined, here are some options to consider:

1. If you have soybeans that are R5.5 (pods almost filled), you are approximately 7-14 days from being "out of the woods". Here is my suggestion, prop your feet up on the edge of your desk, relax, and worry about some of the other issues that could cause yield loss. Rust is **NOT** something to be concerned about based at this advanced growth stage.



2. If your soybeans are younger than R5.5 (keep in mind that an R5.0-5.1 soybean has the beginnings of a seed that can barely be felt through the pod and will essentially be fairly flat, see above photo and photos at right for soybean pod specifics), and you or someone you work for or with is concerned about soybean rust then there are some things we can discuss. Additionally I have included a photo of an R6 soybean pod where the seed are barely touching but they have almost consumed all of the space inside of the pod. Firstly, what is your specific growth stage? Again, if you have questions, please call, but most importantly what is your yield potential, and where is this field located? Also, remember, rust has **NOT** been identified in a soybean field younger than R5.5. But, if you are concerned about soybean rust, or soybean rust has been identified in your field then a triazole fungicide could be applied to reduce the potential for yield loss. However, you would not receive an added benefit of seed quality. This is truly a scout, and apply for disease situation. Do not just apply a fungicide without identifying disease.

3. If you are interested in seed quality and potential protection from any future infection from soybean rust, a triazole/strobilurin mix is one option. This would take care of any rust in the field (if there is any, and even though we have found rust in a broad geographic area we have **NOT** found a lot of rust) and give you the added benefit of seed quality. But, please factor potential weather into this, and as of right now, Ike may not impact any of our soybean acres. So, with that said we may not see any further seed/pod rot if our weather stays clear and warm. But, we won't know the answer to this for several weeks.

4. If you are only seeking seed quality then a strobilurin fungicide can be applied. This will reduce any further infection from rust (if it is present in the field or the vicinity and again, I'll repeat this, we have **NOT** found a lot of rust even though we have found it in a broad geographic area). A strobilurin would provide seed quality protection if applied at the correct growth stage. However, if rust is present in a field then this is not the correct option.

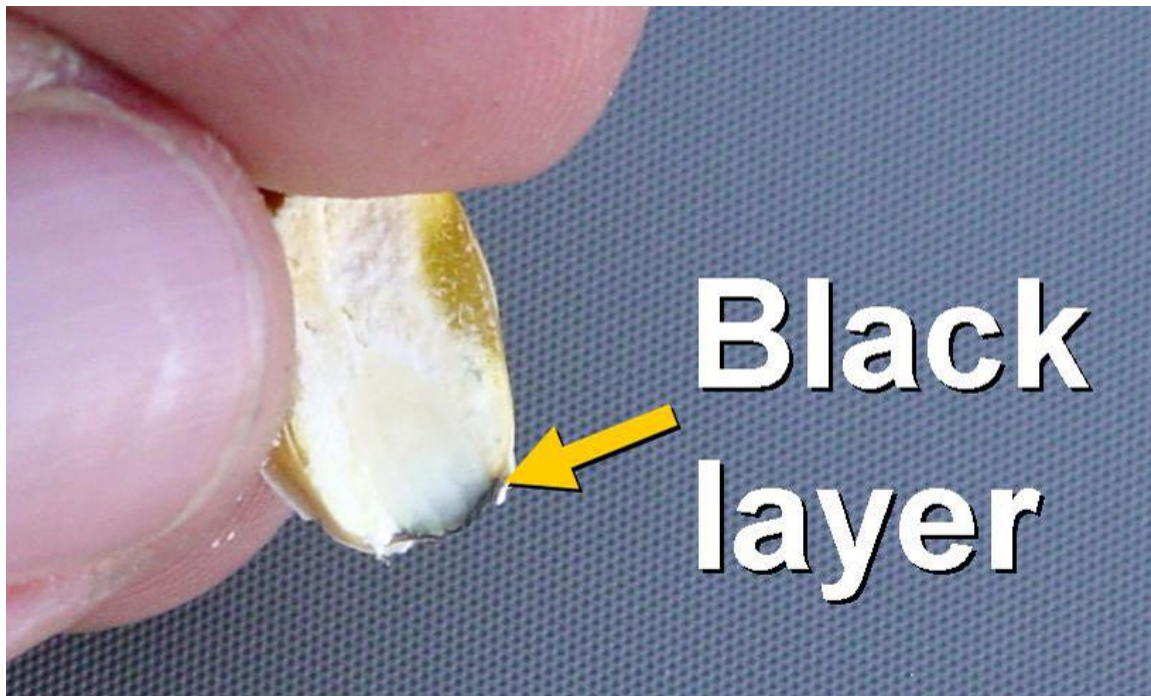
If you have specific questions/comments/concerns, or you think that you have found rust in your field please do not hesitate to call (662-402-9995). If I cannot make it to your field that day I have three very capable scouts that would be very happy to help you identify the disease. Also, stay tuned to the Hotline (1-866-641-1847) as I will update with new finds and any new information as necessary.

Corn Agronomics

Dr. Erick Larson

Why is the corn not drying down? – Corn normally dries about 0.6% per day in Mississippi after it reaches physiological maturity or black layer (when grain moisture is around 30%) down to 15% moisture. The “black layer” is an abscission layer that effectively cuts off moisture transfer between the plant and the grain. Thus, corn grain drying rate is primarily dependent upon environmental conditions. Of course, frequent rainfall, cloudy days, high humidity and low temperatures have dominated our weather since early August. These conditions have considerably slowed or totally suspended field dry down of corn grain, compared to normal August and early September weather.

Figure 1. A cross-section of a physiological mature corn kernel showing the “black-layer.”



Aflatoxin tips – Aflatoxin is a wildcard that can further complicate harvest timing and grain management. If aflatoxin is present during harvest, there are several things you can do to reduce the threat of a problem.

Aflatoxin is a naturally occurring chemical by-product from *Aspergillus* fungi, which commonly infect corn. However, fungal presence does not necessarily mean aflatoxin will develop. Historically, aflatoxin contamination is most likely to occur during seasons with extreme drought stress in dryland fields. Therefore, if you suspect any problems, harvest visibly drought-stressed, stunted or damaged areas and field edges separately from good areas or irrigated corn.

You should also be keenly aware that aflatoxin can develop either in the field and/or storage. Many problems encountered this season are likely related to rainy weather slowing grain drying, encouraging harvest of high moisture corn. Problems can quickly develop because high moisture corn (18-20%) harvested and stored during warm weather (80-90 deg F) are optimum conditions for *Aspergillus flavus* growth, which can rapidly escalate aflatoxin contamination. If you are hauling high moisture corn directly to an elevator, **deliver it absolutely as quickly as possible** for the reasons noted above. Do not store grain in trucks, combines, bins, or any non-aerated site for more than 4 to 6 hours.

These same precautions should be followed if you intend to dry it on farm. Corn should be dried to less than 15% moisture with 24 hours after harvest. High capacity continuous flow driers are generally capable of immediately drying corn to 15 percent moisture or less, but the corn should also be cooled thereafter as well. Fungal growth and subsequent aflatoxin development is dormant when grain moisture drops to about 12 percent, especially when grain temperatures decline to around 55°F, so this should be your goal for long-term storage (through the fall-winter).

Figure 2. Storing and drying high moisture corn presents considerable challenges when the threat for aflatoxin is likely.



Drying grain using in-bin systems are considerably more challenging because of the inherent drying limitations of these systems. These systems rely on air flow through a large grain mass to slowly dry grain as it reaches equilibrium with the air. Therefore, in order to dry grain within the necessary constraints previously noted, you must normally minimize grain depth (commonly 3-6 feet deep) to quickly dry high-moisture corn. As grain depth increases, static pressure against the fan increases, decreasing air output and grain drying capability. Supplemental heat and use of stirring devices will assist drying but cannot overcome air flow limitation that extends drying time in deep-layered grain. Producers should also thoroughly sanitize all handling and storage facilities before and during harvest.

We have limited experience with storing corn in poly bags, particularly related to aflatoxin contamination, so producers should utilize considerable caution and sound grain storage principles with these systems.

Fungal infection is more likely in underdeveloped, shriveled, cracked kernels and foreign material. Also, the percentage of kernels generally contaminated by aflatoxin is very small. Thus, grain quality may be significantly improved by removing these potential sources of contamination from your grain. You should carefully adjust, monitor and operate your combine so that it not only threshes, but also effectively cleans grain while minimizing kernel damage. Cleaning small grain particles and foreign material from the grain is very dependent upon proper sieve and fan settings. A post-harvest mechanical cleaner or gravity separator may also help clean contamination sources from your grain. Combine efficiency is best when ground speed is sufficient to keep the machine full, without overloading. Excessive cylinder or rotor speed is the leading cause of kernel damage during combine harvest. Kernel damage during harvest and handling should be avoided because fungi infect broken kernels more readily than intact ones.

Figure 3. You should carefully adjust and operate your combine to efficiently clean the grain, while minimizing kernel damage. If you suspect any aflatoxin, harvest visibly stressed areas separately from better areas or irrigated corn.

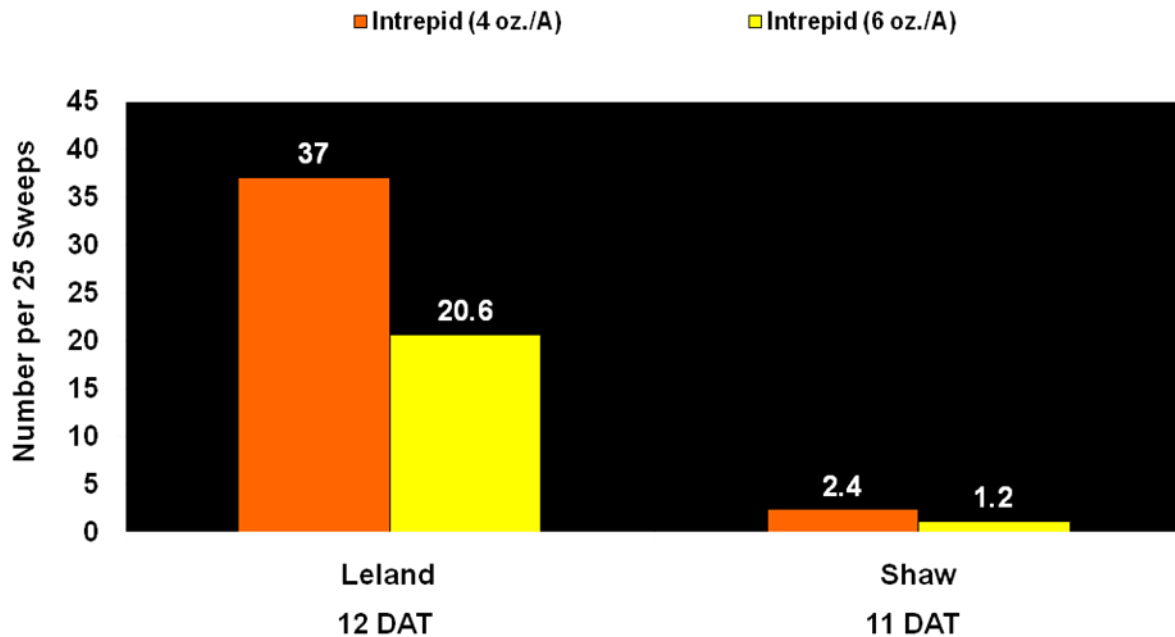


Soybean Insects

Angus Catchot and Dr. Jeff Gore

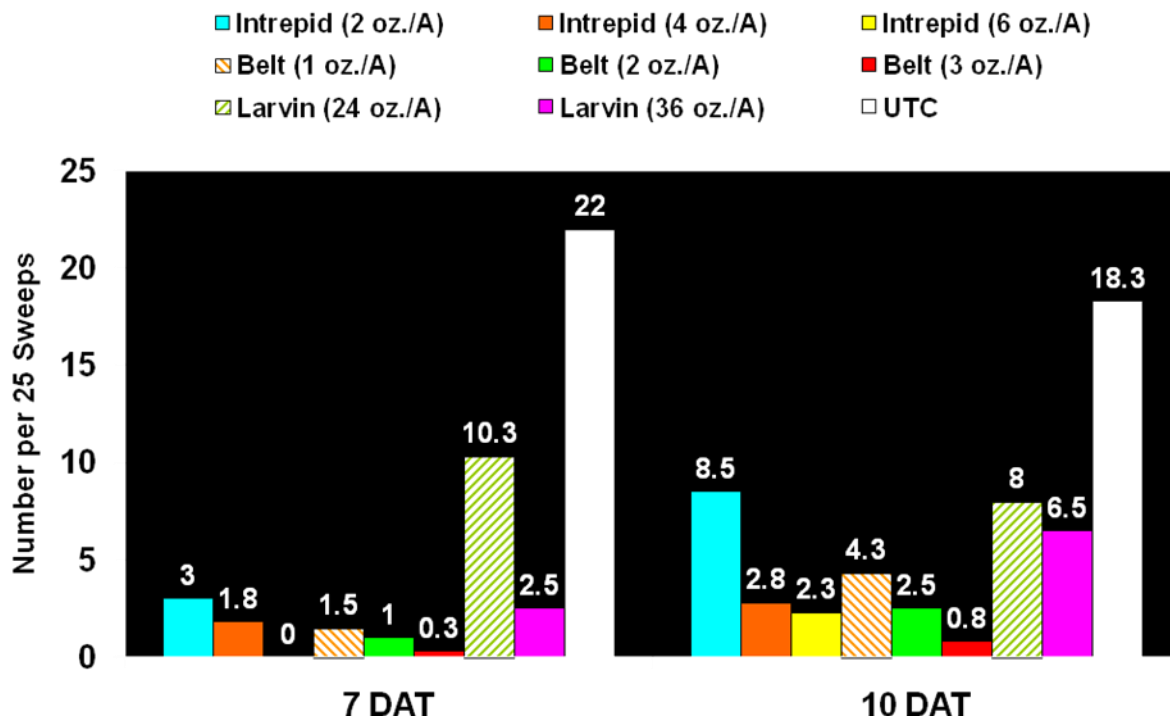
Soybean Looper: Soybean Loopers still remain the number one insect problem we are dealing with in beans at this time. The looper populations are moving north in the delta. I have been getting more calls out of the Clarksdale, Tunica areas in the last 7 days. Also, I have heard of a few isolated reports now of threshold numbers in parts of the hills. There have been a few sporadic reports of disease showing up but levels are low. Below are a series of graphs and tables showing efficacy trials on soybean loopers from Dr. Jeff Gore in Washington County and Dr. Roger Leonard from the LSU AgCenter in LA. There are a couple of products in these tests that you will likely not recognize and are **not currently labeled** in soybeans. The first is Rynaxypyr from DuPont. This product is sold under the Coragen name brand in vegetables and also recently received a label in cotton under the Altacor name brand. The other is Belt by Bayer Crop Science. This product is also **not registered** in soybeans and just recently received a label in cotton and corn. Both of these products are new generation caterpillar products that you will be hearing much more about in the coming months. In all the test below, numbers are represented as loopers per 25 sweeps.

Soybean Looper Control with Intrepid



Leland treated 8/28/08, Shaw treated 8/29/08. Both locations sampled 9/10/08.

Soybean Looper Control - Stoneville



Louisiana State University Northeast Research Station

Evaluation of Selected Insecticides Against Against Soybean Looper -II

Trial ID: MRSB0721

Study Dir.: Temple/PRICE/SHEPPARD

Location: MACON RIDGE

Investigator: B. R. Leonard

Insect Code	PSEPIN	PSEPIN	PSEPIN
Crop Code	GLXMA	GLXMA	GLXMA
Part Rated	LARLIV P	LARLIV P	LARLIV P
Rating Data Type	COUINS	COUINS	COUINS
Rating Unit	NO/25SWP	NO/25SWP	NO/25SWP
Rating Date	8/28/2008	9/1/2008	9/5/2008
Crop Stage	R4	R5	R5
Crop Stage Scale	DESC	DESC	DESC
Insect Stage	MIXED	MIXED	MIXED
Trt-Eval Interval	2 DA-A	5 DA-A	9 DA-A

Trt No.	Treatment Name	Form Conc	Form Unit	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Appl Code	1	2	3
1	Rynaxypyr	1.67	lb/gal	0.044	lb ai/a	3.37	fl oz/a	A	52.4 b	2.3 c	0.5 b
2	Belt	4	lb/gal	0.0625	lb ai/a	2	fl oz/a	A	56.8 b	1.8 c	2 b
3	Non-treated								95.6 a	68.8 a	41.5 a
5	Steward	1.25	lb/gal	0.078	lb ai/a	8	fl oz/a	A	5 c	12.3 b	2.5 b
LSD (P=.05)									11.66	10	8.31
Standard Deviation									8.69	6.55	5.44
CV									16.57	30.8	46.81
Treatment F									91.131	95.8	53.674
Treatment Prob(F)									0.0001	0.0001	0.0001

Louisiana State University Northeast Research Station

Evaluation of Belt vs Steward against soybean looper

Trial ID: MRSB0819

Study Dir.: Temple/PRICE/SHEPPARD

Location: MACON RIDGE

Investigator: B. R. Leonard

Insect Code	PSEPIN	PSEPIN	PSEPIN	PSEPIN
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
Part Rated	LARLIV P	LARLIV P	LARLIV P	LARLIV P
Rating Data Type	COUINS	COUINS	COUINS	COUINS
Rating Unit	NO/25SWP	NO/25SWP	NO/25SWP	NO/25SWP
Rating Date	8/18/2008	8/22/2008	8/24/2008	9/1/2008
Crop Stage	R4	R4	R	R
Crop Stage Scale	DESC	DESC	DESC	DESC
Insect Stage	MIXED	MIXED	MIXED	MIXED
Trt-Eval Interval	2 DA-A	5 DA-A	8 DA-A	15 DA-A

Trt No.	Treatment Name	Form Conc	Form Unit	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Appl Code	1	2	3	4
1	Belt	4	lb/gal	0.094	lb ai/a	3	fl oz/a	A	5.6 c	2.4 c	1.4 c	1.6 d
2	non-treated								61.2 a	44.2 a	54.4 a	35.6 a
3	Steward	1.25	lb/gal	0.098	lb ai/a	10	fl oz/a	A	5.2 c	3.6 bc	7.6 bc	4.6 d
4	Steward	1.25	lb/gal	0.078	lb ai/a	8	fl oz/a	A	9 c	5.8 bc	10 bc	11.8 c
5	Steward	1.25	lb/gal	0.0625	lb ai/a	6.4	fl oz/a	A	24.2 b	9.4 b	16.8 b	22.2 b
LSD (P=.05)									14.83	6.31	9.44	5.32
Standard Deviation									11.24	4.78	7.16	4.03
CV									53.43	36.55	39.67	26.6
Treatment F									22.324	67.745	43.296	59.504
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

Louisiana State University Northeast Research Station

Evaluation of Selected Insecticides Against Against Soybean Looper

Trial ID: MRSB0720
Location: MACON RIDGE

Study Dir.: Temple/PRICE/SHEPPARD
Investigator: B. R. Leonard

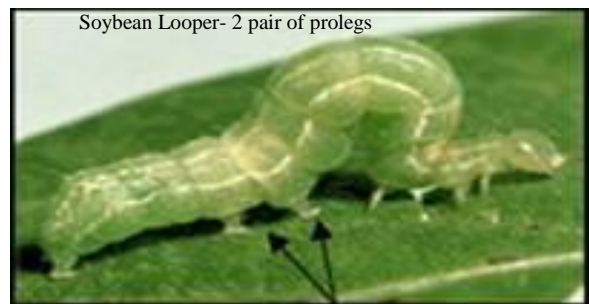
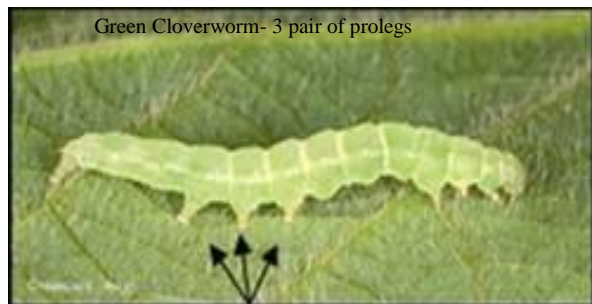
Insect Code	PSEPIN	PSEPIN	PSEPIN	PSEPIN
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
Part Rated	LARLIV P	LARLIV P	LARLIV P	LARLIV P
Rating Data Type	COUINS	COUINS	COUINS	COUINS
Rating Unit	NO/25SWP	NO/25SWP	NO/25SWP	NO/25SWP
Rating Date	8/19/2008	8/22/2008	8/24/2008	9/1/2008
Crop Stage	R4	R4	R5	R5
Crop Stage Scale	DESC	DESC	DESC	DESC
Insect Stage	MIXED	MIXED	MIXED	MIXED
Trt-Eval Interval	2 DA-A	5 DA-A	8 DA-A	15 DA-A

Trt No.	Treatment Name	Form Conc	Form Unit	Rate Rate	Rate Unit	Product Rate	Product Rate Unit	Appl Code	1	2	3	4
1	Intrepid	2 lb/gal		0.125 lb ai/a		8 fl oz/a		A	31.8 b	18.2 c	15.4 cd	2.3 c
2	Intrepid	2 lb/gal		0.094 lb ai/a		6 fl oz/a		A	34.3 b	16 c	21.3 c	1.8 c
3	Intrepid	2 lb/gal		0.0625 lb ai/a		4 fl oz/a		A	43.3 b	27.5 b	29.5 b	11.2 b
4	Larvin	3.2 lb/gal		0.6 lb ai/a		24 fl oz/a		A	2.7 c	1.7 d	10.2 de	11.3 b
5	Non-treated								80.5 a	49 a	63.7 a	25.2 a
6	Steward	1.25 lb/gal		0.0625 lb ai/a		6.4 fl oz/a		A	12.2 c	8.2 d	17.5 cd	7.5 b
7	Rynaxypyr	1.67 lb/gal		0.066 lb ai/a		5.06 fl oz/a		A	14.3 c	2.2 d	2.7 e	1.2 c
LSD (P=.05)									15.83	6.27	7.64	4.96
Standard Deviation									13.43	5.32	6.48	4.21
CV									42.89	30.34	28.3	48.68
Treatment F									22.456	59.004	56.345	24.295
Treatment Prob(F)									0.0001	0.0001	0.0001	0.0001

North East MS Update

Dr. Don Cook

Stink bug numbers appear to be increasing in later maturing soybeans as the earlier maturing soybeans approach maturity. I have gotten several reports of looper infestations and have found mixed infestations of loopers and green cloverworm.



Cotton Agronomics

Dr. Darrin Dodds

Crop Condition: According to the USDA-NASS report released on September 8, 2008, nearly 40% of Mississippi cotton has open bolls compared to 81% at this time last year and a five-year average of 71%. Additionally, 62% of the crop is rated as good to excellent; however, with lingering effects from Hurricanes Gustav and Fay as well as potential damage from Hurricane Ike, this number could go down significantly. We have been receiving reports and reporting on boll rot and hardlock for the past several weeks. Some areas appear to have very little to no problem with boll rot or hardlock whereas other areas could suffer 30-40% if not greater yield loss. Cotton growing counties in the north Delta do not appear to have received the massive rainfall amounts that counties in the central and south Delta have received. Weather station reports from Stoneville indicate that 16.5" of rain have been received in Stoneville since August 1. However, reports from several areas in Washington and Bolivar counties indicate over 30" of



rainfall has been received during this time. Large amounts of rainfall have led to significant problems with boll rot and hardlock as well as flooding fields resulting in severe yield losses. Reports of seeds sprouting in the boll are coming in as well which may lead to quality problems for the grower as well as problems for cotton gins that have offered rebates based on the sale of cotton seed.

Cotton Defoliation: Growers are beginning to make limited defoliation applications but many are waiting to see what Hurricane Ike has in store for us. Initial applications will be thidiazuron

(Dropp, FreeFall, etc.) and ethephon (Prep, Super Boll, Boll'd, etc.) based; however, keep in mind that thidiazuron products require a 24-hour rainfree period for maximum effectiveness. Additionally, keep an eye on the temperature, these products tend to be less effective when temperatures begin to cool. Ginstar is another thidiazuron product that also contains diuron. This product tends to be more active under cooler conditions than thidiazuron-only products. However, historically there has been more desiccation potential with Ginstar compared to thidiazuron-only products. Def is a phosphate based product that works well on mature foliage across a range on environmental conditions; however, keep in mind that activity on juvenile growth and regrowth inhibition are limited. Rate selection is essential with this product and as a result, increased rates when temperatures are warm may lead to desiccation problems. Additionally, it appears that Def will be in limited supply this year. There are several herbicidal type defoliant available as well including Aim, Blizzard, ET, etc. that provide activity on mature leaves and juvenile growth but offer poor regrowth inhibition. Product and rate selection for all defoliant and boll openers should be based on condition of the field in question (% open, maturity of uppermost harvestable boll, etc), the weather forecast, requirement of a boll opener, level of regrowth control needed, and one vs. two pass defoliation programs.

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