

Mississippi Crop Situation 2010

August 27, 2010

Mississippi State University Extension Service

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[Past Newsletters Archive](#)

Newsletter Shortcut Bar- Click to Skip to Topic

[Soybean Insects](#)

[Soybean Agronomics](#)

[Soybean Disease](#)

[Cotton Agronomics](#)

[Market Briefs](#)

[Moth Traps](#)

[Contact List](#)

[Subscribe](#)

This Week's Crop Report

National Agriculture Statistics Services (Mississippi) Crop Progress for Week Ending 8/22/2010

Crop	This Week	Last Week	Last Year	5- Year Average
Corn Mature	93	86	80	81
Corn Harvested	48	30	14	28
Cotton – Open Bolls	50	28	7	24
Rice Mature	80	64	13	29
Rice Harvested	15	5	0	2
Sorghum Mature	82	63	42	64
Sorghum Harvested	15	5	0	2
Soybeans Setting Pods	98	97	99	99
Soybeans Turning Color	57	45	34	53
Soybeans Dropping Leaves	34	23	14	33
Soybeans Harvested	13	5	0	14
Sweet Potatoes Harvested	5	1	0	1

This will be the last weekly scheduled newsletter. For the remainder of the year they will go out on an as needed basis.

Soybean Insects

Angus Catchot

Soybean Loopers continue to plague the remaining crop that is still susceptible to loss of yield from defoliation. Mississippi has traditionally been a very early planted soybean state. Because of this we have missed major problems from soybean loopers since loopers migrate up later in the year and our crop as a whole is finished before large acres are exposed to the loopers. Over the last several years, as more grains are being planted, we have shifted some of our acres to later maturing varieties and later planting dates to spread the harvest. As a result we are seeing more and more acres being exposed to migrating looper populations and are treating significantly more acres for this pest. To date approximately 15% of our acres are still susceptible to yield loss from defoliating pests. We have treated numerous acres in the Delta and many more than usual in the hills this year. Also, we are seeing high numbers of green cloverworms and velvetbean caterpillars in some areas of the hills now. There have been many questions regarding how late to protect foliage from defoliating pests. We currently recommend protecting foliage until R7 growth stage is reached. Actually, when you reach R6.5 there is very little yield loss associated with defoliation. The problem is what is R6.5? Generally depending on planting date and variety there are 7-14 days between R6 and R7. A safe assumption would be that 7 days past R6 you could lose your foliage without appreciable yield loss. The problem is nearly every field has variability within the field on growth stages and there are some plants at R6 and some at R7 and all stages in between. Knowing that a looper takes 12-14 days to complete its larval cycle, and

that they consume 90% of the foliage they will eat in the last few days as a larva, a population that comes in at R6 will likely not cause extensive defoliation for at least 7-9 days which puts you at or very near R7 before major defoliation will occur. I would likely let them go in that situation. Keep in mind that they may take all the foliage but you will not get your money back from treatment. With that said, there are many things to consider. For example if you are running very high numbers, foliage loss will happen more rapidly simply based on the numbers alone. I have had reports of some counts as high as 250 loopers per 25 sweeps. The bottom line is there are several factors to consider and this has to be done as a field by field decision, not as a blanket rule. Also, there is still considerable variability between people judging growth stages and that has to be considered. The safe thing to do is terminate applications for foliage feeders when R7 is reached and there will be no “guess work” involved. If you need help with this feel free to call.

Soybean Agronomics

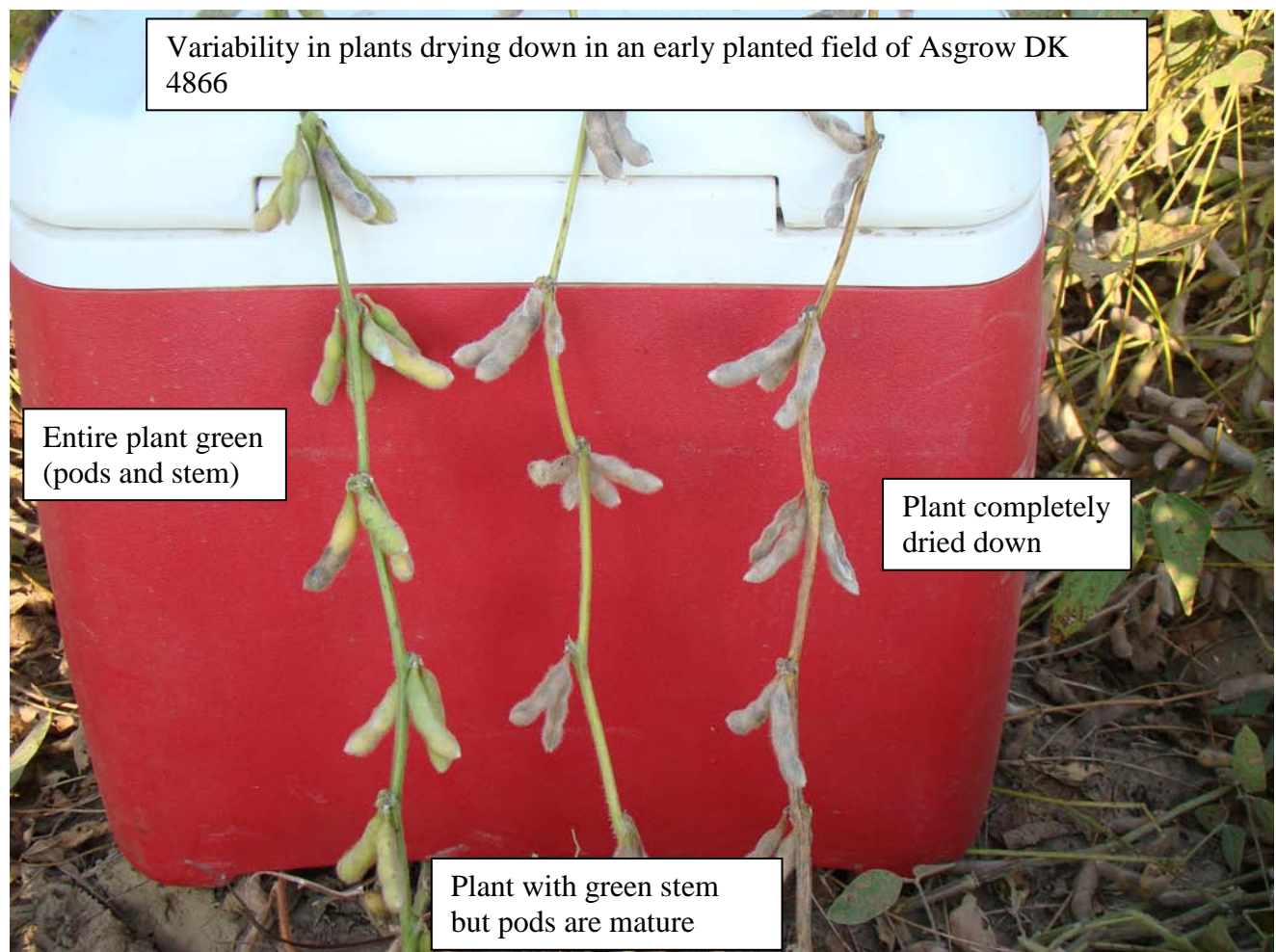
Dr. Trey Koger

Every year we desiccate some soybean fields for a variety of potential reasons. This year is no different. A few common features have emerged for many of the fields we have desiccated to this point. Some of our earliest planted irrigated fields are ones staying the greenest and requiring a harvest aid application. In many fields being treated with a harvest aid the stems are staying green and many of the leaves are not falling off while most of the pods on these plants are reaching full maturity. In most of these same fields, you will have plants that have completely dried down and are about ready to harvest while adjacent plants remain completely green (stems, leaves, and pods). These issues create problems with respect to the ability to harvest a clean crop, excessive foreign matter, and excessive moisture in most cases. Having plants completely dried down next to green plants makes it difficult to make the decision as to whether or not apply a harvest aid. Making the decision to apply a harvest aid is often dependent upon several factors and not simply whether or not the field needs a harvest aid and/or is ready to desiccate. Factors such as the number of soybean acres to harvest, combine capacity, combine efficiency (newer or older combine), weather patterns and/or looming tropical weather, potential grain bin storage, crop contract deadlines, neighboring crops, and how much potential crop are we going to lose in cases where ground rigs are going to be used to apply a harvest aid. These are a few of the factors often involved with making the decision as to whether or not or when to apply a harvest aid. For the most part if harvest aids are applied at the appropriate growth stage, the harvest aid itself will not increase soybean yields. The harvest aid will however speed up the crop and get it ready to harvest sooner and in most cases improve harvest efficiency and the speed in which we can harvest the crop. The harvest aid will also reduce the amount of foreign matter harvested and placed in the grain tank, especially in cases where we have a lot of green beans and/or green pods or excessive weed pressure.

The issues we are seeing with green beans and difficulties with harvesting soybean (especially group fours) this year is not a new one. We have issues related to quality and getting soybean to dry down properly in the field every year. It is never exclusive to one variety, but this year we are seeing one particular variety having a difficult time drying down properly in the field. Many fields planted in early April to Asgrow DK 4866 have had a difficult time in drying down. Again, this is not the only variety but for some reason we are seeing more fields of this variety where it was planted in early April staying green (stems and leaves) and having a lot of green beans in the field. One reason for this is that we plant a lot of Asgrow DK 4866 all across the state. It is a very versatile variety with excellent and in most cases consistent yield potential. We plant more in acres in the state to this one variety than any other variety. Thus stands to reason

we are going to see more fields of this variety have some sort of problem. This variety along with many other gray colored varieties has historically had issues with not drying down uniformly across every field. However, this year for some reason we are seeing this variety not drying down uniformly in many fields, especially where it was planted in early April. We have struggled to determine as to why this particular variety is having a difficult time in drying down in many fields. Some factor or a combination of factors involving the extreme heat we endured this summer or possibly the excessive shed of flowers and small pods we encountered may have impacted the plant not wanting to dry down or the fact that in many of these fields we have plants that have dried down uniformly adjacent to plants that entirely green from top to bottom.

In cases where a harvest aid is used to help plants to dry down, keep in mind a harvest aid is not going to make a green pod dry down to 13% moisture quickly. A properly applied harvest aid will help to turn green pods and green plant tissue brown and thus will eventually help these green pods to get closer to full maturity but will not get these green beans to 13% moisture in timely manner and in many cases not in time before the field has to be harvested to prevent shattering of the crop that dried down properly. The pictures below are from a field of Asgrow DK 4866 planted in early April (April 5th). The field has never been planted to anything but cotton for at least the past 50 years.



Soybean Disease

Dr. Tom Allen



For the past several weeks there have been numerous fields detected with light to severe cases of aerial web blight. Most of these particular fields have been located in the eastern part of MS but additional fields were detected throughout the southern part of MS. The particular fungus that causes aerial web blight, *Rhizoctonia solani*, prefers hot temperatures and high humidity. However, over the past few days temperatures have dropped considerably throughout the entire state. This is an ideal situation for several reasons but this also means that aerial web blight will shut down with the reduced temperatures. Generally speaking, when plants develop a woody pod, typically at R6, the pods become much less susceptible to damage from the fungus. At this stage, with the reduced temperatures (unfavorable conditions for disease development) a fungicide application will not be necessary to prevent damage.

Cotton Agronomics

Dr. Darrin Dodds

Crop Update: As has been the case for most of the year, things are moving quickly as we approach the end of this cropping season. Cotton continues to mature rapidly and the number of defoliation applications is increasing daily. While we are not yet to the point of widespread defoliation, we will be there and beyond before we know it.

Defoliation: Defoliation has long been considered both an art and a science although one aspect of that equation likely carries more weight than the other. To that end, there are many different approaches to defoliation each with its own unique characteristics. There are several different aspects to consider when developing a “recipe” for defoliation. The first of which is temperature today and for the succeeding 3 to 5 days. Warmer temperatures certainly broaden the window of

products that will provide effective defoliation. In addition, one should consider the need for re-growth prevention, boll opening, and if a one or a two-pass defoliation program will be utilized. Products most sensitive to lower temperatures are Dropp SC and Freefall WP. Once daytime temperatures begin to fall below 80°F and nighttime temperatures begin to drop as well, activity from these products will be reduced. Although temperatures have cooled to some degree recently, the application window for these products should remain open for the next few weeks depending on temperatures. Ginstar will withstand somewhat lower temperatures than Dropp or Freefall while maintaining activity due to the addition of diuron to thidiazuron (Dropp, Freefall). However, caution regarding rate and additive selection should be exercised when applying Ginstar when high temperatures are present as the potential for dessication is increased. Def 6 EC/Folex 6 EC are not as sensitive to temperature as other products and have been used effectively for years. They will not help with re-growth control or with boll opening. Aim and ET are herbicidal defoliant that will maintain performance under lower temperatures. If you are using these products when temperatures are warm, extreme caution must be exercised as excessive dessication may occur. During periods of warmer conditions, these products have a better fit as a second application to clean up remaining leaves on the skirt or juvenile leaves in the upper portions of the plant.

Fiber Quality: In the Mid-South cotton is grown for optimum yield with lesser emphasis placed on fiber quality. Fiber quality usually does not come into the discussion unless discounts are being applied because of poor fiber quality. I would submit that the manner in which we grow and manage cotton is more so to protect against losses from poor quality than to capture premiums for optimum quality. Examination of a loan sheet will reveal that there are many more areas from which deductions are applied than where premiums are applied. To that end, some have expressed concern over potential micronaire values from this year's crop. When trying to determine if the potential for low or high micronaire exists, it is important to understand fiber formation. Cotton fibers develop in an organized manner. Beginning the day of bloom, cells that will eventually become fibers elongate outward into the boll. Final length is reached in about 16 to 20 days after formation. After fiber length is maximized, the fibers begin to thicken. Cotton fibers thicken from the inside out. Daily growth is added to the inside of that fiber unlike a tree in which annual rings are added to the outside of last year's growth. Cellulose that is added each day is deposited at different angles similar to that of fiberglass which contributes to the strength of the fiber. Generally, when a boll develops into maturity, the layers added to the center of the fiber partially close the center of the fiber 20 days after thickening begins. After fibers thicken, they begin to dry which results in crimping and twisting of the fiber. Crimping and twisting of the fiber are what allows cotton fibers to intertwine and be spun into thread.

Mike	
Range	Diff.
2.5 – 2.6	-1100
2.7 – 2.9	-750
3.0 – 3.2	-325
3.3 – 3.4	-125
3.5 – 3.6	0
3.7 – 4.2	25
4.3 – 4.9	0
5.0 – 5.2	-150
5.3 &	
Above	-275

Causes of low and high micronaire cotton: We all know that cotton bolls located at different fruiting positions on a given plant are at differing levels of maturity. Lower bolls may be fully mature, mid bolls may not be fully mature and higher bolls may be immature depending on when you examine each. These differing levels of maturity can lead to low micronaire. During growing seasons that are cut short for whatever reason, low micronaire can be an issue. Essentially, the number of somewhat immature and fully immature bolls are more in number than fully mature bolls and when harvested and mixed together the result is low micronaire cotton. In addition, when cotton has a large fruit load and inadequate carbohydrates to fill out these bolls low micronaire can occur. There are several factors that can lead to inadequate

carbohydrate supply including dense stands, high nitrogen, potassium deficiency, and excess irrigation among others. It is not uncommon in years with high levels of fruit retention to see low micronaire due to carbohydrate demand and supply.



However, when more than ample carbohydrates are available, micronaire tends to increase to the point that high micronaire can become an issue. High

micronaire can be caused by poor boll set and/or small boll size due to heat and water stress. High temperatures cause boll shed while the same level of carbohydrates are still available. This results in excess carbohydrates being partitioned to remaining bolls and high micronaire. More mature bolls are typically higher in micronaire than younger bolls as they matured during conditions of peak carbohydrate supply compared to younger bolls. First position bolls tend to be higher in micronaire as well. Short fibers can also lead to high micronaire. As above, if fibers are short and the same level of carbohydrates are available, they are going to be used to thicken the fiber. Given equal amounts of carbohydrates, a shorter fiber will be thicker than a longer fiber.

So why make such a big deal about micronaire and causes of high and low mike? The way this year is shaping up, the potential for micronaire problems exists. Several folks have reported smaller bolls on plants with reduced seed counts most likely due to weather conditions. With smaller bolls and lower numbers of seeds in each boll, while maintaining adequate carbohydrate supply, the potential exists for high micronaire. Although it is impossible to know without collecting samples and getting a fiber quality analysis, if you suspect high micronaire will be an issue some thought should be given to defoliation timing. Preliminary data from the University of Arkansas using the Hal Lewis method to determine micronaire indicates that selected varieties may have high micronaire values if defoliation applications are delaying until 60-70% open. As a result, some varieties should be defoliated somewhat earlier rather than later.

The take home message is this, if the variety you have planted tends to have inherently higher micronaire values than others, you may consider defoliating these at 50% open compared to 60 – 70% open. Defoliating somewhat early will help reduce micronaire due to presence of not fully matured bolls at the time of application.

Table 1. Use pattern and expected activity from defoliants and dessicants.

Harvest Aid ¹	Labeled Broadcast Rate/Acre	Max. Use per Season	Rainfree Period (hours) ²	Pre-Harvest Interval (Days)	Estimated min. temp.	Mature leaves	Juvenile growth	Re-growth prevention	Boll opening
Def 6	16-24 oz	24 oz	1	7	60 F	Excellent	Fair	Poor	None
Folex 6	16-24 oz	24 oz	1	7	60 F	Excellent	Fair	Poor	None
Ginstar	6.4-16 oz	16 oz	12	5	60 F	Excellent	Excellent	Excellent	None
Aim	0.5-1.6 oz	3.2 oz	8	7	55 F	Excellent	Excellent	Poor	None
ET	1.5-2.75 oz	5.5 oz	1	7	55 F	Excellent	Excellent	Poor	None
Dropp SC	1.6-6.4 oz	9.6 oz	24	5	65 F	Excellent	Excellent	Excellent	None
Freefall WP	0.1-0.4 lb	0.6 lb	24	5	65 F	Excellent	Excellent	Excellent	None
Finish 6 Pro	21-42 oz	42 oz	6	7	60 F	Excellent	Poor	Fair	Excellent
FirstPick	96-112 oz	112 oz	N/A	7	60 F	Excellent	Poor	Poor-Fair	Excellent
Glyphosate ³	11-44 oz	44 oz	4	7	55 F	Fair	Fair	Excellent	None
Ethephon	21-42 oz	42 oz	6	7	60 F	Fair	Poor	Poor	Excellent
Desiccants									
Gramoxone Inteon	3.1-32	32	30 min.	3	55 F	Fair	Excellent	Poor	Fair
Sodium Chlorate	4.5 # ai	N/A	24	7	55 F	Fair	Fair	Poor	None

¹ Addition of spray adjuvants may enhance defoliation during cold temperatures or when leaves are tough from drought-stressed conditions. However, adjuvants may increase leaf desiccation during the early season when temperatures are warm.

² Expected rainfree periods are estimates only and may or may not be exact. Other conditions, including temperature, moisture and crop status, will play a role in product performance.

³ Non-glyphosate tolerant varieties only.

Table 2. Label restrictions for planting small grains following harvest aid application in cotton.

Harvest Aid	Small Grain Re-crop Interval
Def 6	None
Folex 6	None
Harvade 5F	6 months
Ginstar	1 month
Leafless	6 months
Aim	None
ET	None
Dropp SC	14 days
Freefall	14 days
Finish 6 Pro	1 month
FirstPick	30 days
Glyphosate	None
Ethephon	30 days
Gramoxone Inteon	None
Sodium Chlorate	None

Market Briefs

Dr. John Michael Riley

Cotton Shakes Stock Market Concerns

Cotton prices continue to rally despite losses in equities surrounding uncertainty in the US economy. The Dow Jones Industrial Average dropped 134 points on Tuesday (August 24) and cotton initially followed suit – falling to a low of 82.46 cents/lb – but shook the news by days end closing at 85.22 and has moved higher the remainder of the week. The remaining crops did not fare as well. Soybeans, corn, rice and wheat harvest month futures contracts fell on Tuesday and again on Wednesday before moving higher as the week draws to a close.

The fact that cotton shed the stock market woes speaks loudly to the expected tightening global supplies in the face a larger domestic crop with a better than average crop rating. This was evidenced by strong export sales reported this week. Wheat has cooled over the past three weeks and other grains are feeling these effects. Abundant soybeans supplies still look feasible despite flooding in Iowa and as such prices have trickled down after moving higher with wheat. Corn supplies also look to be bountiful but demand remains strong.

Futures Market Summary (Thursday close)

	Soybeans	chg*	Corn	chg*	Wheat	chg*	Rough Rice ¹	chg*	Cotton ²	chg*
Sep-2010	1013¢	-4	416 1/2¢	2	656 1/2¢	-25	\$11.35	0.55		
Oct-2010									89.24	2.49
Nov-2010	1014 1/2¢	2					\$11.62	0.56		
Dec-2010			432¢	3	688 1/2¢	-26			86.15	2.60
Jan-2011	1022 1/4¢	3					\$11.89	0.57		
Mar-2011	1026¢	2	445 1/2¢	4	711 3/4¢	-20	\$12.16	0.57	84.79	3.02
May-2011	1026 1/2¢	1	453¢	6	714¢	-16	\$12.42	0.56	84.74	2.97
Jul-2011	1034¢	1	459 1/4¢	6	697 1/4¢	-9	\$12.69	0.55	84.58	2.61
Aug-2011	1025 3/4¢	1								

¹ Dollars per hundredweight

² Cents per pound

* Change from previous Thursday

Source: Chicago Board of Trade and Intercontinental Exchange; except where noted prices are cents per bushel

Moth Traps

Fred Musser Trap Line

August 24, 2010

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm	BAW
Attala	-	67	-	5	4
Calhoun	35	27	3	4	6
Chickasaw	8	81	1	73	14
Lee	107	19	1	14	0
Lowndes	56	88	4	18	23
Madison	133	40	2	6	25
Monroe	-	27	-	9	0
Noxubee	15	18	6	14	0
Oktibbeha	200	45	2	20	56
Rankin	32	51	3	4	13
Scott	-	75	-	15	30
Webster	0	11	4	7	3

Ryan Jackson USDA Trap line

August 25, 2010

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm
Washington	36	40	10	42
Sharkey	120	53	12	38
Humphreys	23	--	0	26
Yazoo	97	31	4	13
Holmes	32	104	8	55
Leflore	72	69	22	64
Tallahatchie	157	64	14	26
Coahoma	151	62	21	251
Bolivar	197	56	23	127
Sunflower	99	78	34	48

Contact Information

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