

Mississippi Crop Situation

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This Weeks Planting Report

National Agriculture Statistics Services (Mississippi) Crop Progress for Week Ending 6/21/09

Crop	This Week	Last Week	Last Year	5- Year Average
Corn Silked	70	53	81	79
Corn Dough	12	1	13	15
Cotton Emerged	99	94	100	100
Cotton Squaring	24	12	37	55
Cotton Setting Bolls	0	--	--	3
Peanuts Pegging	5	0	6	--
Rice Headed	0	--	0	1
Sorghum Emerged	100	98	100	100
Sorghum Heading	0	0	28	19
Soybeans Planted	99	97	99	100
Soybeans Emerged	95	90	97	99
Soybeans Blooming	33	20	57	61
Soybeans Setting Pods	10	--	--	18
Winter Wheat Mature	100	100	100	99
Winter Wheat Harvested	97	82	95	95

Cotton Agronomics

Dr. Darrin Dodds

Crop Update: Only a few short weeks ago everyone was wondering if the rain would ever stop. However, as most people feared, it has stopped and the weather forecast for the next 10 days is not promising in terms of rainfall. 74% of the state is considered to be short or very short of soil moisture. However, we are in somewhat better shape in the moisture department than we were at this time last year. Last year at this time, 43% of

the state was abnormally dry or in a moderate drought compared to 19% this year. Cotton growth and development around the state could best be classified as variable. In some areas blooms are present whereas in others squares haven't appeared yet. Accordingly, plant height and node development varies depending location, planting date, variety, etc.

Plant Growth Regulators: As the crop progresses, plant growth regulator applications will, or in some cases have, begun. Although, PGR's have been around for over 30 years and everyone

Table 1. Cotton growth and development.

Location	Plant Height (in)	# of Nodes
Sledge	11	6
Mattson	13	10
Glendora	16	10
Greenwood	15	9
Indianola	19	9
Inverness	21	11
Hollandale	20	11

is very familiar with their use, a discussion of how these products work as well as typical crop response is warranted. Essentially a plant growth regulator reduces the amount of growth hormones within the cotton plant. The result of this is reduced division and elongation of plant cells which leads to smaller, thicker leaves, reduced internode length, reduced number of nodes, and shorter plants. Plant height reductions of 5 to 15% are common following application of a plant growth regulator. However, plant growth regulators will not shrink existing leaves and stems, only limit further growth.

Based upon the timeline that this crop is on, plant growth regulator application should be more carefully considered than usual. Late planted cotton tends to be highly vigorous and produces higher amounts of vegetative growth due to crop development during periods of warm temperatures and long day lengths. Plant growth regulator application may restrict development of vegetative growth and force the plant to allocate resources to fruit retention and boll development. However, care must be exercised when applying plant growth regulators. Since these products restrict growth and development, application to cotton that is already under stress (i.e. lack of water, etc.) should be approached with caution as these applications may lead to yield reductions. Yield



response to plant growth regulator application has always been erratic. A review of scientific research reveals positive yield responses to plant growth regulator application, negative yield response, and no yield response whatsoever. Generally, yield response has been minimal during long, favorable growing seasons when excess vegetative growth is not an issue. Yield decreases have typically been observed when PGR applications were made to stressed cotton.

Product selection can also be confusing as there is a plethora of products on the market today. Claims of yield and or fiber quality benefits with selected products are also very common. Research and Extension personnel from across the Cotton Belt have been addressing this issue for the past couple of seasons. Based on our research, all mepiquat based products provided similar plant height reductions. In addition, no yield response was observed due to application of any plant growth regulator. Although some extremely minor fiber quality differences were observed, these differences were of little economic importance at the end of the year. Based upon our research, product selection should be based upon the needs of your operation not upon potential yield or fiber quality benefits. If you are on a very tight budget and need to save money anywhere possible, the cheapest available (although still a quality product) PGR may be best. However, if you would rather handle less material, products that have application rates in the 2-4 oz/acre range may be preferred over those that are applied at 8-16 oz/acre.

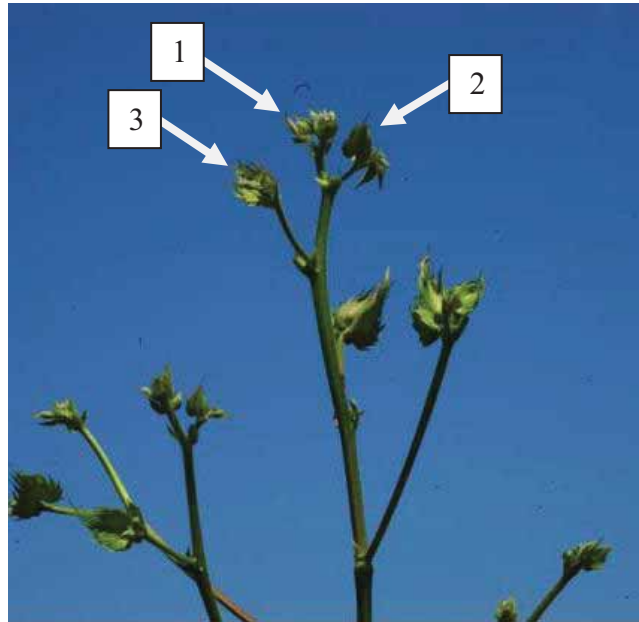
Cotton Insects

Angus Catchot

Plant bug numbers began to turn the corner late last week and have picked up substantially as this week progressed in some areas of the delta. I have had numerous reports now of counts running 25-40% even in cotton that was treated 3-5 days ago. It will be hard to evaluate the effectiveness of your products when treating adults that are steady migrating into the fields on numbers alone. I would strongly encourage you to take square retention counts along with your sweep net counts to get a better idea of how the products are working. Numbers alone can be

deceiving when high numbers of adults are moving into the field. Square retention counts are extremely easy and fast to do. There are numerous ways to do it but this is the method that we prefer: Get a clicker or keep up with this in your head. Look at first position squares starting at the terminal going down the plant. I would not spend a lot of time in the terminal digging for tiny pinhead squares but look at the first square you can easily find (usually between pinhead and match head size). Count down 3 first position squares (some people do 5 positions down) and move to the next plant keeping up with how many squares you have looked at. Do this in several places in the field until you have looked at 100 sites. Any time you see a position that is missing, blasted, or flared keep up with that number separately. If the plants are small and only have 1 or 2 first positions only count those and move to the next plant. If it has more than 3, that's fine also but stop counting there and move to next plant.

Example: You have looked at 100 first position fruiting sites and have 15 missing sites you are at 85% square retention. You will be very surprised at how fast you can do this, especially if you use a clicker. If you have the clicker, use it to keep up with the total number of positions you look at and keep up with the number of missing in your head since it will be a smaller number. Every time you look at a position click. Occasionally look down and stop when you get to 100. Not only is square retention a great aid in monitoring the crop fruit set, it is one of the only ways to get an assessment on how your applications are working when you are dealing with large populations of migrating adults into a field. Please call if you have any questions about this.



Missing Square



Blasted Square



Flared Square

Rice Agronomics

Dr. Nathan Buehring

Conditions for the last couple of weeks have been hot and dry, especially in the southern portion of the delta. Very little rain has been received and very little is in the forecast. With the 95 F plus temperatures this crop is growing at very good pace. Some rice that was planted in March should begin to head at the first of next week. The early April planted rice is past midseason and the late April rice will be approaching midseason within a week or so. With no rice being planted the first two weeks in May, the late May planted rice is flooded or will be shortly.

My acreage estimate for 2009 would be close to 230,000 acres which is the same as last year. The southern delta increased in acres, but the northern delta decreased in acres. I would estimate that at least 10,000 acres of rice in the northern delta did not get planted due to the excessive rains.

USDA estimates our crop condition as 3% Very Poor, 7% Poor, 19% Fair, 68% Poor, and 3% Excellent. As it does every time this year, the crop appears to look fairly good. I would argue though sometimes things often look better from the turnrow than out in the field. This year, rice stands are thinner and there are holes where there is no rice. From the turnrow, this cannot often be seen due to the height and vegetative growth surrounding those areas. As you can tell I am still a little leery about this year's rice crop. This is because of two main reasons: thin rice stands and a 1/4th to 1/3rd of our rice was planted after May 15th.

On the insect forefront, there are no major issues. Rice Water Weevils have not been a major problem this year. Most of our rice gets a preventative pyrethroid application at flooding though. Rice stinkbugs will be on wait see program. With the recent dry weather, the grass along ditches and turnrows has not been actively growing, which may help keep the populations at a lower level.

Diseases such as sheath blight have been relatively low. The hot and dry conditions have not been very conducive for pathogens. If the conditions persist for the next 2 to 4 weeks, a lot of the rice will receive 0 to 1 application of a fungicide. This will mainly depend on the variety. The Clearfield varieties and Cocodrie will likely need one application. All other varieties and hybrids will receive a fungicide application only if presence and severity warrants for an application. If sheath blight is present, watch for movement up the plant. With the current conditions we are under, sheath blight will likely be present but movement up the plant will be very minimal. If the sheath blight is not moving up the plant, a single fungicide application at late boot will only be necessary. This will help protect the plant through heading from sheath blight and kernel smut.

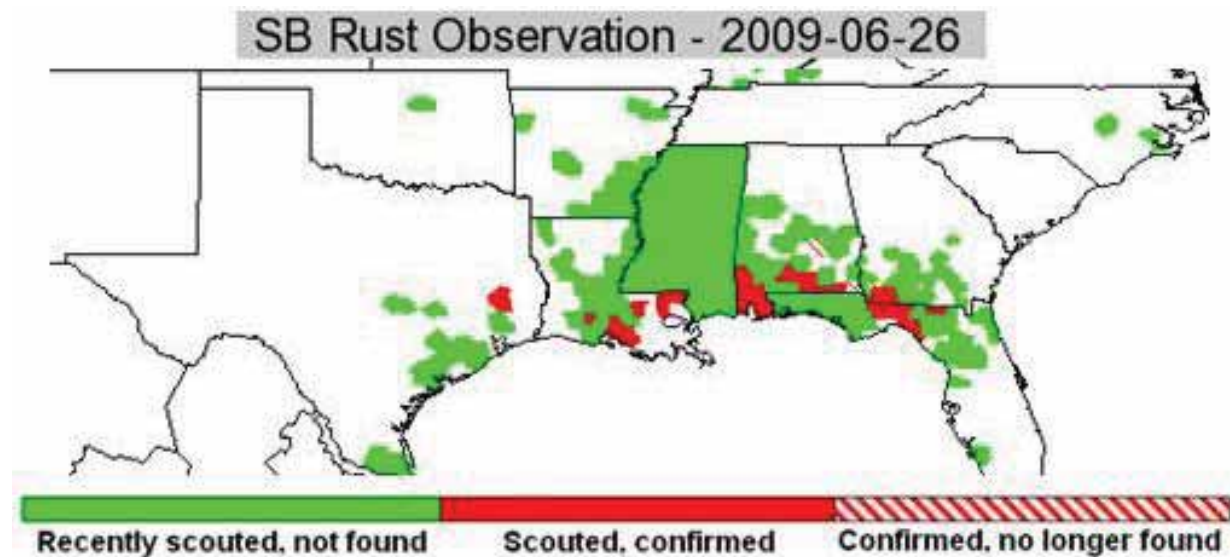
Soybean Rust Update

Dr. Tom Allen

Over the past few weeks I've received a lot of questions about the situation regarding soybean rust. We've done a lot of scouting in Mississippi already and have NOT found any rust. However, while we haven't found any rust in MS, other states in our region continue to find low levels of soybean rust on both kudzu and soybeans. At present time, the environmental conditions in most of the southeastern and mid-southern U.S. has not been conducive for rust to be transported great distances nor for rust to develop. The fungus that causes soybean rust doesn't like high temperatures or lots of solar radiation. Typically the fungus prefers high

humidity, good cloud cover, and cooler (more moderate) temperatures. This is great news for our farmers to this point in the growing season.

Notes from around the rest of the nation:



Alabama – As of this morning AL has 6 total positive counties, all in the southern part of the state. Five of the counties were confirmed positive with low levels of rust on kudzu while the other county (Washington County) was confirmed positive on kudzu in a sentinel plot in Fruitdale, AL which is less than 10 miles from the border with MS. In all cases rust has been detected at very low levels and due to the high temperatures will likely not increase quickly.

Florida – Over the past week FL has seen temperatures around 100°F and hasn't reported rain in the past two weeks. At present time FL has 5 positive counties, all detected in the field on kudzu at very low levels. However, within the past 4 days FL has added one county so while rust isn't likely to move or lead to damage during these environmental conditions scouting has still detected the disease.

Georgia – Like the rest of the southern U.S. at this time GA has been hot and dry for the most part. The southwestern part of the state has recently received isolated showers. Four counties in southern GA that border FL are positive for soybean rust. All counties were confirmed positive based on identification of the disease on kudzu. As in all other states the disease is present at low levels but the rust in Grady and Thomas counties (the most eastern positive counties) is said to be on the increase due to the local environment and some of the isolated rain showers.

Louisiana – Most of the rust found to this point in the season has been found in LA. The weather conditions in LA have been similar to the conditions we've experienced in MS with mostly hot and dry conditions. Presently, LA is reporting rust from 8 parishes. All but one of the reported locations has been on kudzu. In some cases new reports of the disease have been identified in locations that are close to reported soybean rust positive sites. One kudzu location, in southern LA just outside of New Iberia, LA has likely been positive for soybean rust ever since the disease was first identified in the U.S. in late 2004. This site was found to be positive earlier than normal this season and rust has continued to build at this location. I've been in contact with LA on a regular basis and am keeping an eye on the developing situation to our south.

Texas – This past week TX reported rust from a historically positive kudzu site in eastern TX, geographically near Livingston, TX. Rust was detected at very low levels. TX has also been reporting dry conditions with high temperatures throughout the majority of the state.

Corn Insects

Dr. Chris Daves

Southwestern corn borer trap captures increased again this week. It was the around the 1st week July when trap captures peaked last year in the central and southern regions of the state. This week Carroll, Humphreys, Leflore, Tallahatchie, and Yazoo counties reported the highest trap counts (see SWCB Trap Counts by county on the last page of the newsletter). I would anticipate traps counts increasing again next week based on 2007 and 2008 trap counts.



We do not have an action threshold for SWCB based on trap captures. Our threshold is based on the presence of egg masses and/or larvae present in the field. Pheromone traps are used to detect peak emergence for each generation and as an indicator for intensifying scouting efforts. Control measures should be taken when egg masses or small larvae are present on 25% of the plants. Keep in mind that good coverage is essential for acceptable control and insecticides should be applied before larvae enter the stalk.

Corn Agronomics

Dr. Erick Larson

Heat Stress – Well above normal temperatures the last few weeks have prompted questions about its effect on corn pollination and productivity. High temperatures, especially nighttime temperatures in the 70's and 80's, reduce corn yield potential, by increasing wasteful respiration. However, high temperatures should not generally prohibit pollination, unless severe water deficit is also present. Pollination problems are extremely rare when soil moisture is adequate to promote plant growth and maintenance functions, which serve to cool plants. Therefore, proper irrigation should minimize potential pollination problems. Pollination problems can occur in dryland fields with extremely low soil moisture reserves. The excessive saturation during vegetative stages most corn endured earlier this spring, increases likelihood of water deficit of dryland corn during this critical period, because it limited root growth and depth, and promoted crown rot in inundated areas. Severe stress stunts corn silk growth and slows silk emergence relative to pollen shed – in other words, stress stunts the plants just prior to and during fertilization, promoting failure, because fertilization is no longer synchronized. Since pollen shed occurs in a relatively short (5-8 day) period and silks emerge slightly later than pollen shed initiation, pollination failure occurs if silks fail to emerge in time to receive pollen. This synchrony problem often results in more blank kernels near the ear base, because basal silks are the last to normally emerge.

Figure 1. Although high temperatures will reduce productivity, high temperatures alone rarely promote pollination failure. If soil moisture is adequate, corn plants can cool themselves and develop normally, albeit not as efficiently.



Will irrigation or rainfall hurt pollination? - Corn possesses a vast overabundance of pollen and several traits, which make the pollination process relatively immune to overhead irrigation or rainfall disturbance. Corn produces a huge overabundance of pollen grains (more than 4000 pollen grains per silk). Physical disturbance caused by overhead irrigation occurs over a very short time period in relation to corn pollination capacity. Pollen shed normally lasts 5 to 8 days, during which pollination may occur at any time. Corn plants also have an innate ability to stop pollen shed when the tassel is too wet or dry and trigger pollen shed when conditions are favorable. Additionally, silks are quite sticky, which makes pollen grains hard to wash off after they land on a silk. Thus, the physical disturbance caused by rainfall or overhead irrigation will not reduce corn pollination in a normal field environment.

Figure 2. Corn pollination is relatively immune to mechanical disruption. However, severe drought or other types of stress can disrupt synchrony between pollen shed and silk emergence, causing pollination failure.



2009 Budworm/Bollworm/SWCB Trap Captures

Ryan Jackson USDA Trap line

June 23, 2009

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm	FAW
Washington	18	46	9	0	-
Sharkey	30	11	0	0	-
Humphreys	17	44	66	0	-
Yazoo	3	0	21	0	-
Holmes	21	0	4	0	-
Leflore	41	54	0	0	-
Tallahatchie	35	88	7	0	-
Coahoma	49	114	--	0	-
Bolivar	31	94	0	0	-
Sunflower	16	45	0	0	-

Fred Musser Trap line

June 23, 2009

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm	BAW
Grenada	--	1	--	0	0
Hinds	70	0	24	1	0
Madison	5	18	48	2	0
Rankin	3	4	75	6	16
Oktibbeha	4	36	1	5	5
Noxubee	34	4	18	14	4
Lowndes	7	12	44	15	2
Lee	28	2	27	7	0
Prentiss	5	1	77	0	--
Chickasaw	0	1	19	0	2
Calhoun	2	10	27	8	0
Webster	3	2	9	0	1

Southwestern Corn Borer - Chris Daves June 18 - 24, 2009

County	Traps Reporting	Total Reported	Avg/Trap	County	Traps Reporting	Total Reported	Avg/Trap
Adams	4	0	0	Lowndes	3	67	22
Alcorn	-	-	-	Madison	5	118	24
Bolivar	10	10	1	Monroe	4	19	5
Calhoun	4	4	1	Noxubee	14	37	3
Carroll	4	437	109	Panola	11	37	3
Clay	2	1	1	Pontotoc	4	29	7
Coahoma	4	35	9	Quitman	6	9	2
Copiah	2	0	0	Rankin	5	7	1
Covington	4	0	0	Sharkey	4	2	1
DeSoto	2	13	7	Simpson	4	0	0
George	4	0	0	Tallahatchie	15	829	55
Grenada	8	24	3	Tate	2	0	0
Hinds	4	0	0	Tunica	-	-	-
Holmes	5	22	4	Warren	4	0	0
Humphreys	21	1,553	74	Washington	13	119	9
Issaquena	4	2	1	Webster	4	0	0
Lee	2	2	1	Yalobusha	12	30	3
Leflore	20	766	38	Yazoo	19	1,129	59

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