Mississippi Crop Situation

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This Weeks Planting Report

National Agricultures Statistics Services (Mississippi) Crop Progress for Week Ending 4/19/09				
Crop	**This Week**	**Last Week**	**Last Year**	**5- Year Average**
Corn Planted	84	79	85	88
Corn Emerged	61	52	67	74
Cotton Planted	0	0	1	8
Rice Planted	17	15	29	33
Rice Emerged	4	1	4	11
Sorghum Planted	6	3	17	28
Soybeans Planted	15	12	22	39
Soybeans Emerged	5	2	7	22
Winter Wheat Jointing	96	86	99	98
Winter Wheat Heading	81	40	63	68

Cotton Agronomics

Dr. Darrin Dodds

Planting Update: Cotton planting began this week in areas where dry field conditions and available resources dictated. Many growers are planting/replanting corn and soybeans with cotton planting just beginning to enter into the mix. The five-day weather forecast is excellent for planting; however, there is a 40% chance of rain on Tuesday (28th) and Wednesday (29th) of next week. As with other crops, there is an "optimum" window in regard to planting dates for cotton in Mississippi. It may seem redundant to discuss planting dates for cotton; however, under our current cropping systems it is important not to devalue the importance of cotton planting date in favor of planting other crops. Historical data has shown that cotton planted after May 15 tends to suffer from reduced yields in comparison to cotton planted prior to May 15. However, there are many factors that can influence this including spring and fall weather conditions. As everyone remembers, the spring of 2008 was very challenging for cotton planting. As a result, nearly 50% of our cotton was planted around the third week of May. Accordingly, cotton harvest was delayed to some degree in many areas. In addition, challenging fall weather in some areas has resulted in the first cotton of 2009

being picked in January. Although cotton acreage has declined over the past couple of years and cropping systems have become more diversified, do not discount the importance of timely planting and the effect that this can have on yields.

Seeding Rates and Crop Density: Research regarding cotton seeding rates has been conducted for decades in Mississippi and across the Cotton Belt. Based on these studies, it appears that a final plant population of 40,000 to 55,000 plants per acre will consistently produce the highest yields. However, other research has indicated that plant populations of 25,000 per acre will produce acceptable yields provided that none of these plants are lost to insects, disease, etc. and that they are evenly spaced with no large gaps present. Similar yields are often observed at lower plant populations due to increased vegetative, second, and third position bolls. However, these bolls are often set at the expense of earliness. These bolls will take longer to develop and mature, and as a result, delayed maturity is not uncommon. Maturity delays of up to one week have been observed when reducing plant populations from 4.0 seed/ft to 2.0 seed/ft. Plant heights in reduced stands tend to be shorter and require lesser amounts of plant growth regulator compared to increased plant populations. In light of current cotton seed cost, it may be tempting for some to try to reduce seeding rates in order to stretch how far a bag of seed will go. However, reducing seeding rates puts tremendous strain on the plants that are in the field to produce at a maximum level. In addition, the loss of just a few plants can result in severe yield reductions and potentially require re-planting. Although seed cost is expensive, the money spent on a few more seed per acre may save a lot of headaches down the road.

Corn Agronomics

Dr. Erick Larson

Why is my corn not growing like it should? – There are several potential reasons why your corn is not growing as well as normal this spring, but most are likely closely related to the cool, wet conditions prevalent since planting.

Corn growth rate during germination and seedling stages is closely related to soil temperature, rather than air temperature - particularly daily high temperatures. Cloudy, cool conditions have kept morning soil temperatures generally well less than 60 degrees F this spring, meaning low soil temperatures have limited growth considerably more than normal. Corn germination and growth generally cease at temperatures of 50 degrees F or lower. Cold periods combined with saturation have contributed to considerable corn stand failure associated with early plantings this season. Weather records throughout the south Delta show two separate five to six day periods with virtually zero GDD 50's immediately preceding and subsequent to March 5-10, when considerable corn acreage was planted. Weather records at Stoneville also show Growing Degree Day 50 accumulation since late March is about 30% less than normal and we have had 15 days with low temperatures of 50 degrees F or less, this month.

Many fields have less corn growth in sandy soils, compared to heavy, clay soils. This may be related to low soil temperature as well, since light-colored sandy soils absorb less solar radiation than darker soils, and thus, are likely cooler. Furthermore, coarse sandy soils have less buffer capacity, compared to clay soils, to resist the effects of nitrogen fertilizer decreasing soil pH or herbicide injury. Herbicide injury is generally more likely when cool, wet conditions persist because lethargic corn has more difficulty metabolizing herbicides, compared to vigorous plants which are actively growing. To diagnose potential limitations, I first suggest taking soil samples from stunted areas and adjacent healthy areas. Nutritional differences can be identified using this method. Many initially associate early growth problems with inadequate or poor nitrogen

availability, but this is rarely the case. Nitrogen is very mobile in the soil and corn requires relatively little nitrogen until rapid growth begins, so nitrogen fertilizer placement and amount rarely limit early season corn growth. However, soil pH, phosphorus, potassium, magnesium and zinc commonly limit early season corn growth in Mississippi.

Figure 1. A soil thermometer is a very valuable tool for assessing crop planting conditions.

Figure 2. Poor early season corn growth is often due to nutritional problems. This field has a soil pH of 6.7 in the foreground, but drops to 4.5 in the background. All the seasonal nitrogen was applied near planting, which may have transiently lowered soil pH more as well.

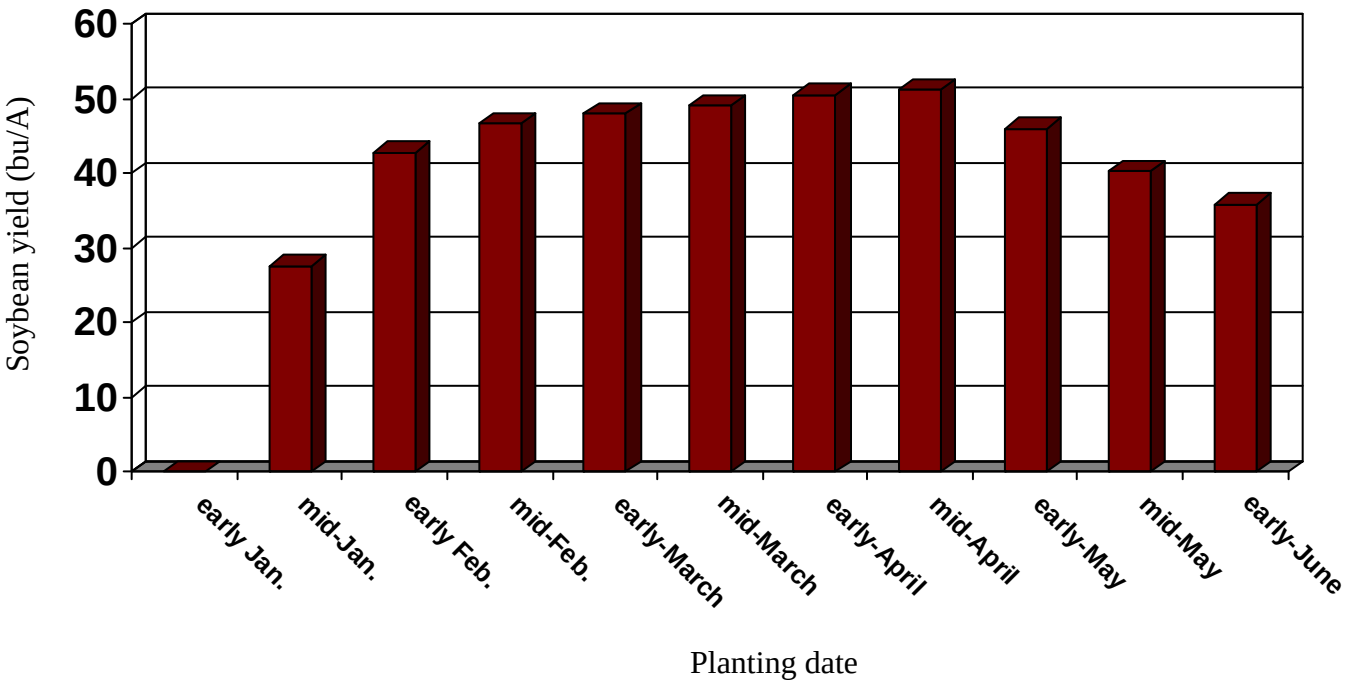
Soybean Agronomics

Dr. Trey Koger

Planting Date: Planting date is one of the most important components of our soybean production system in Mississippi. Fortunately, planting date has been one of the most widely researched components of soybean production in the midsouth. Dr. Larry Heatherly (retired, USDA-ARS, Stoneville) studied the importance of early planting in conjunction with the early soybean production system extensively in his 30+ year career at Stoneville. There is no need for me to go into a long spill about the importance of planting date, as many of us growing soybean in MS today understand the importance of early planting. However, it is important to not under value the importance of early planting. The tables below are a condensed section of a series of long-term (1976-2003) data from Dr. Larry Heatherly regarding the impact of planting date on soybean yield. Again, these yields are average across 28 years of data that includes a tremendous amount of diversity with respect to environmental conditions, precipitation, as well as insect and disease pressure. The tables include soybean yields for group IV and V soybean under irrigated and non-irrigated environments as affected by planting date.

		Irrigated yield (bu/A)			Non-irrigated yield (bu/A)	
		Maturity group			Maturity group	
		IV	V		IV	V
Planting date						
Before April 16		62	57		41	38
April 16 to May 1		60	54		35	34
May 1 to May 16		54	49		26	28
May 16 to June 1		47	46		22	26
After June 1		37	38		17	20

Recently, we have built upon this data to evaluate the impact of planting data in non-irrigated soybean by looking at planting dates ranging from January thru June. Basically, this information further supports Dr. Heatherlys' data regarding the importance of early planting.



Maturity date calculator: Anticipated maturity data for soybean is important information when making decisions regarding harvest capacity and timing, especially in situations where custom harvesters are hired in advance and/or in the situations of trying to coordinate soybean harvest around harvesting of other crops. A useful tool for determining for determining anticipated maturity date for soybean as affected by relative maturity of the soybean planted and planting data is the Maturity date calculator. This software was designed by Ling Zhang (DREC, Stoneville). The software is currently going through a renovation process, but useful information can still be extracted from the program. Below is a table showing anticipated date of maturity for soybean having relative maturity from 4.5 to 5.5 when planted from early April to late-May.

	Planting date						
Relative maturity	3/20 – 3/31	4/1 – 4/10	4/11 – 4/20	4/21 – 4/30	5/1- 5/10	5/11 – 5/20	5/21 – 5/30
4.5	Aug. 12	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 23
4.6	Aug. 14	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 25
4.7	Aug. 16	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 20	Sept. 26
4.8	Aug. 18	Aug. 26	Sept. 2	Sept. 9	Sept. 15	Sept. 22	Sept. 27
4.9	Aug. 20	Aug. 28	Sept. 4	Sept. 11	Sept. 16	Sept. 23	Sept. 28
5.0	Aug. 22	Aug. 30	Sept. 6	Sept. 13	Sept. 18	Sept. 25	Sept. 30
5.1	Aug. 24	Sept. 1	Sept. 8	Sept. 15	Sept. 20	Sept. 26	Oct. 1
5.2	Aug. 26	Sept. 3	Sept. 10	Sept. 17	Sept. 22	Sept. 28	Oct. 2
5.3	Aug. 29	Sept. 5	Sept. 12	Sept. 18	Sept. 24	Sept. 29	Oct. 3
5.4	Sept. 1	Sept. 7	Sept. 14	Sept. 19	Sept. 25	Oct. 1	Oct. 5
5.5	Sept. 1	Sept. 9	Sept. 16	Sept. 20	Sept. 26	Oct. 6	Oct. 6

Wheat Disease Update

Dr. Tom Allen

Wheat disease update: As a general wheat health report from across the Delta and other parts of the state, there have been increasing (but still very low) disease reports. Extremely low levels of powdery mildew, leaf rust, strip rust, and septoria leaf blotch have been reported over the past few weeks. Unlike last season I have had only two reports where fields required a fungicide application to prevent yield loss from a disease. One of those fields had a high level of leaf rust present. The field was located not far from Hattiesburg and the particular variety was not known. Very (and I stress very) low levels of leaf rust are present in Delta wheat. Additionally, even though I know some consultants and producers have reported stripe rust from wheat, I have not detected stripe rust in MS. However, Arkansas and Louisiana have both detected and reported low levels of stripe rust. In the majority of the fields that I have scouted, disease has been present on lower leaves and has not reached the flag leaf. For proper wheat development to occur the most important leaf is the flag leaf. At this time in the season lower leaves are shaded, usually have more moisture present on them, and serve as a nutrient source rather than a sink. When this occurs these particular leaves are more susceptible to infection from any of these pathogenic fungi.

In a few isolated cases freeze damage has appeared following the head emerging from the boot. Most of this damage occurred prior to the cold snap that we encountered several weeks ago. Symptoms of cold damage will oftentimes appear as unfilled wheat florets and the tip of a wheat head could also be white in color (see attached photo). Similar symptoms can appear on leaves with regards to white plant tissue.

Most of the state's wheat crop has either started to flower or in most cases is farther along developmentally. More importantly, if a fungicide is necessary to prevent yield loss all fungicides can only legally be applied through Feekes 10.5 which is full head emergence and will occur prior to the wheat plant flowering. Essentially, if a plant is flowering then a fungicide can no longer be legally applied. Application of a fungicide after Feekes 10.5 could result in illegal fungicide residues on the wheat plant. There is one exception to this and that is only if you are using prothioconazole (Proline) to suppress the development of Fusarium head blight (scab). Rarely (if ever) have we had a problem due to head blight of wheat in MS.

If you have any specific questions related to the presence of a particular wheat disease or whether or not a fungicide might be warranted, please feel free to call me.

Market Update

Drs. John Anderson and John Michael Riley

Cotton

Cotton planting progress is, for the most part, at a standstill in the Delta and Southeastern regions. According to USDA's *Crop Progress* report on Monday April 20th Mississippi has planted no cotton compared with the five year average of 8%. Arizona, California and Texas are the only states that register above the 10% level of planting (35%, 45% and 17%, respectively). This has aided an already positive trend in price. The December cotton futures contract price has been moving upward since early March, gaining about 10 cents/lb as of today (April 24th).

Rice

According to USDA's April 20th *Crop Progress* report, US rice planting progress registered 29% complete (compared with its five year average of 39% for the same period). Mississippi planting progress is at 17% complete versus 33% over the previous five years. The November CBOT Rough Rice futures contract is currently (April 24th) at $12.44/cwt which is a slight improvement over mid-March prices around $11.70/cwt.

Corn and Soybeans

For corn and soybeans, and wheat, the major fundamental issue in the market right now is corn planting progress. Planting progress has been slow in many parts of the country due to cool, wet weather. USDA's Crop Progress report for this week showed the corn crop as being 5% planted through last weekend. The 5-year average progress for this time of the season is 14% planted, so the year is off to a slow start. This provides some support for corn prices at the same time that is undermines support for soybeans. (If planting is delayed too much, acres may flip from corn to beans.)

It is, of course, still early, and prospects for corn planting seem to have improved quite a bit over the course of this week. The market will be closely watching next Monday's Crop Progress report for guidance. Planting progress much below 20% in next week's report will be bullish for corn, bearish for beans – vice versa for planting progress of around 25% or better.
Despite the focus on planting, other factors are also at work in the market. A Monday rally in the dollar, and consequent sell-off of crude oil got the week off to a rocky start for corn and soybeans both. Solid export demand has been good for both commodities this week. The corn market has wavered a bit on fears of weaker domestic demand, though. This fear stems in part from the ongoing debate in California over how to measure the carbon footprint of ethanol. This could impact the ethanol sector nationwide, though whether (and how quickly) it might do so are debatable points. Soybean demand remains pretty solid, with old crop fundamentals improving as stocks dwindle.

Wheat

The wheat market has behaved much like the corn market over the past week – and for much the same reason. Outside markets (that is, crude oil) pressured prices lower to start the week, but prices have drifted steadily higher since then as concern over production issues support the market. Spring wheat planting in the Northern Plains is going very slowly, with only 6% of the crop planted through last weekend compared with a 5-year average of 21%. The condition of the winter wheat crop is nothing to write home about, but it does appear to be more-or-less stable with 43% of the crop in Good-to-Excellent condition. This is not much different from last year, though more of this year's crop is also rated Poor-to-Very Poor. As warmer weather spreads across the country next week, the market will continue looking at winter wheat condition and spring wheat planting progress for price direction.

Soybean Rust

Drs. Tom Allen and Trey Koger

2009 Soybean rust fungicides

There are a few minor changes that have occurred since the end of the 2008 season with regards to the soybean rust fungicides. First and foremost, Punch will no longer be available following the 2009 season. DuPont has withdrawn this product from the market. With that said if there is any Punch available it can be used in 2009 since there is still a Section 18 in place. Additionally, please note that Caramba is no longer available for use at this time. Alto and Quadris Extra have both received a full Section 3 label and Headline SBR has been discontinued.

Should any new developments occur in the coming weeks and months please feel free to use the soybean rust hotline (1-866-641-1847). We will update this hotline as frequently as necessary with information that is pertinent for our producers. At present time soybean rust has NOT been detected in MS. However, AL, GA, and LA have active soybean rust on kudzu.

If you have any questions please don't hesitate to contact me.

Table 1. Soybean rust fungicides available in 2009/

Trade Name	Active Ingredient	Type of Label	Rate range	PHI	Chemical Group
Preventative:					
Headline	Pyraclostrobin	Section 3 (Full)	6-12 fl oz/a	21 days	Strobilurin
Quadris	Azoxystrobin	Section 3 (Full)	6.2-15.4 fl oz/a	14 days	Strobilurin
Curative/Penetrant:					
Alto 100 SL	Cyproconazole	Section 3 (Full)	2.75-4 fl oz/a	30 days	Triazole
Bumper 41.8 EC	Propiconazole	Section 3 (Full)	4-8 fl oz/a	No later than R6	Triazole
[w]Caramba	Metconazole	Section 3 (Full)	8.2-9.6 fl oz/a	30 days	Triazole
Domark 230 ME	Tetraconazole	Section 3 (Full)	4 - 6 fl oz/a	No later than R5	Triazole
Folicur	Tebuconazole	Section 3 (Full)	3-4 fl oz/a	21 days	Triazole
Laredo EC	Myclobutanil	Section 3 (Full)	4-8 fl oz/a	28 days	Triazole
Laredo EW	Myclobutanil	Section 3 (Full)	4.8-9.6 fl oz/a	28 days	Triazole
Orius 3.6F	Tebuconazole	Section 3 (Full)	3 -4 fl oz/a	30 days	Triazole
[x]Proline	Prothioconazole	Section 3 (Full)	2.5-3.0 fl oz/a	30 days	Triazole
Propimax EC	Propiconazole	Section 3 (Full)	4-8 fl oz/a	No later than R6	Triazole
[y]Punch	Flusilazole	Section 3 (Full)	3-4 fl oz/a	30 days	Triazole
Tilt	Propiconazole	Section 3 (Full)	4-8 fl oz/a	No later than R6	Triazole
[z]Topguard	Flutriafol	Section 18 (Emergency)	7 fl oz/a	21 days	Triazole
Curative/Preventative:					
Quadris Xtra	Cyproconazole + Azoxystrobin	Section 3 (Full)	4 oz/a	30 days	Triazole + Strobilurin
Stratego	Propiconazole + Trifloxystrobin	Section 3 (Full)	5.5-10 fl oz/a	No later than R6	Triazole + Strobilurin
Quilt	Propiconazole + Azoxystrobin	Section 3 (Full)	14-20.5 fl oz/a	No later than R6	Triazole + Strobilurin
Preventative/Penetrant:					
*Bravo Weather Stick	Chlorothalonil	Section 3 (Full)	1.5-2.25 pt/a	42 days	Chloronitrile
*Echo 720	Chlorothalonil	Section 3 (Full)	1.5-2.5 pt/a	42 days	Chloronitrile
*Echo 90DF	Chlorothalonil	Section 3 (Full)	1.25-2.0 lb/a	42 days	Chloronitrile
*Equus 720 SST	Chlorothalonil	Section 3 (Full)	1.5-2.4 pt/a	42 days	Chloronitrile
*Equus DF	Chlorothalonil	Section 3 (Full)	1.25-2.2 lb/a	42 days	Chloronitrile
*Echo Zn	Chlorothalonil	Section 3 (Full)	1.5-2.75 pints/a (3 app.) 2-3.5 pints/a (2 app.)	42 days	Chloronitrile

Table 1. Fungicides approved or pending approval in Mississippi for soybean rust control in 2009.
[w]BASF has discontinued this product due to an inert ingredient issue. This product is not currently being marketed.
[x]Bayer is promoting this product as a tank mix with Stratego at a 10 + 1 fl oz/a rate.
[y]DuPont has withdrawn this product from consideration for a full Section 3 registration. However, if there is remaining product available it can be used for 2009.
[z]The Section 18 registration on this product will expire 5/11/2010. The Section 3 registration decision will occur at some point in late 2009.
*Chlorothalonil has only limited activity against rust, but only as a topical protectant. Probably should be used in rotation with more effective products.

Announcements

The 2009 Insect and Weed Control Guides are in.

See your local extension agent to get a copy

New Publication on Soybean Insect Identification. To see a web version click on this link http://msucares.com/pubs/publications/p2543.pdf or see your local extension agent to get a hard copy.

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Extension Row Crop Contact List			
State Specialist Contact Information			
Darrin Dodds	Cotton Specialist	662 418-1024 cell	dmd76@pss.msstate.edu
Erick Larson	Grain Crop Specialist	662 418-7802 cell	elarson@pss.msstate.edu
Trey Koger	Soybean Specialist	662 207-1604 cell	tkoger@drec.msstate.edu
Chris Daves	Corn Entomology Specialist	662 418-1492 cell	cdaves@ext.msstate.edu
Angus Catchot	Entomology Specialist	662 418-8163 cell	acatchot@ext.msstate.edu
Nathan Buehring	Rice Specialist	662 822-7359 cell	nathanb@ext.msstate.edu
Mike Howell	Peanut Specialist	601 795-1425 cell	mshowell@ext.msstate.edu
Larry Oldham	Soils Specialist	662 312-9250 cell	loldham@pss.msstate.edu
Steve Martin	Extension Economist-Cotton & Rice	662 588-3080 cell	smartin@ext.msstate.edu
John Anderson	Extension Economist	662 324-3672 cell	Anderson@agecon.msstate.edu
John M. Riley	Extension Economist	662 325-7986 office	jriley@ext.msstate.edu
Area Specialist Contact Information			
Tom Allen	Delta – Plant Pathology	662 402-9995 cell	tallen@ext.msstate.edu
Gordon Andrews	Delta - Entomology	662 820-8808 cell	gordona@ext.msstate.edu
Chris Daves	South MS - Entomology	662 418-1492 cell	cdaves@ext.msstate.edu
Area Agronomist Contact Information			
Art Smith	North Delta	901 239-3283 cell	arts@ext.msstate.edu
Jerry Singleton	Central South Delta	662 299-7092 cell	jerrys@ext.msstate.edu
Ernie Flint	Central MS	662 582-1211 cell	ernestf@ext.msstate.edu
Bill Maily	South West	601 540-5582 cell	billm@ext.msstate.edu
Jay Phelps	North	662 488-5500 cell	jayp@ext.mssate.edu
Bill Burdine	North Central	662 456-0517 cell	bburdine@ext.msstate.edu
Charlie Stokes	North East	662 386-7307 cell	charlies@ext.msstate.edu
Dennis Reginelli	East Central	662 418-4480 cell	dennisr@ext.msstate.edu
Randy Smith	South Central	601 813-7166 cell	hsmith@ext.msstate.edu
Mike Howell	South	601 795-1425 cell	mshowell@ext.msstate.edu

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