March 2007

Mississippi State University Extension Service

Agronomy Notes

Inside this issue:

Cotton
by Dr. Tom Barber

Acreage Shift - It is going to be a very interesting growing season in Mississippi. This year we are very likely to see an extreme change in the landscape of the Delta and many other Mississippi counties as well. Harvest will especially look different, instead of a sea of white; the landscape will be covered with left-over residues of corn and bean harvest. No doubt that cotton acres will take a hit in 2007. The extent of the loss in acreage is still in question and the weather in March has a lot to do with how many acres of cotton will be planted to corn. Soybean intensions continue to reduce cotton acres as well; every day the market price rises, soybeans will continue to rob cotton acres. There is speculation from many cotton gins in the Delta that their cotton acres will be reduced 50-60% from last year. If this is true across Mississippi then cotton acres could be reduced to record low levels. I personally find it hard to believe that cotton acres will drop to that extent. My estimate on acres remains between 800,000 and 900,000 for 2007. We will loose some infrastructure at this level. If we drop below 800,000 acres, the loss in cotton infrastructure throughout the state may be unrecoverable.

Soil Fertility - Soil testing and variety selection remains at the top of the to-do list to prepare for the 2007 cotton growing season. If you haven't pulled a soil test in the fall, it is extremely important to complete this task before cotton is planted. Last year I went on many field calls where the soil pH levels were below 4.5. Cotton will not produce at pH levels less than 5.5. This will be even more important after we harvest this large corn crop and plan on rotating to cotton in 2008. Potassium continues to be one of the major deficiency problems at peak bloom during the middle of the growing season. Potassium is also one of the best hedges against a dry summer. High levels of potassium will increase cotton yield drastically in a dry year. Soil testing will provide important information on nutrient levels without having to guess, what rates that need to be applied. I constantly hear how expensive it is to grow cotton these days. Yet when it comes to fertility many growers just guess at what rates mixed fertilizers should be applied. As the old saying goes, "don't guess, soil test", putting factual data with recommended fertilizer rates will help you count dollars on the front end and take the guess work out of the equation. The 1200 lb/A lint yields that many growers expect and long for, will not happen without appropriate soil fertility levels.

Variety Selection - Variety selection decisions seem to get more complicated every year. With market prices low for cotton, everyone needs to do there homework on variety selection. Selection seems to be more difficult now than ever, because of the rapid turnover of varieties and introduction of Flex, BollGard II, Widestrike, and Liberty Link technology. The cotton variety testing program at Mississippi State University has two good years of data on these new varieties and technology. I encourage you to check out the data on the Mississippi State website at http://msucares.com/crops/cotton/index.html. Remember it is always important to spread risk over your farm. Plant proven performers on 75-80% of all acres and try some new varieties that have performed well within the last couple of years on the remaining 20-25%. Each grower will have to decide this year if Flex cotton will work best in his/her production system. Many growers want to plant Flex cotton and move away from residual herbicide applications.

Weed Resistance - Let me remind you that weed resistance is a very serious issue in our state. It is extremely important, even in Flex cotton, that residual herbicides remain a key ingredient in a cotton weed control program. Layby applications are crucial in the system as well. We continue to have increasing problems with late season grasses. Residual herbicides at layby are the only methods of controlling these weed flushes late in the season. It is important to budget in residual herbicides regardless of which technology package you choose. Glyphosate resistance may not occur on your specific farm today, but a proactive approach in delaying resistance is the key to economic weed control and profitable cotton production in the future.

Corn
by Dr. Erick Larson

Planting Pitfalls – Producers are well aware that early planting typically produces better corn yields, but rushing the process often instigates problems that overwhelm the benefits of early planting. Southern growers often hurry to get their crop planted, because rainfall restricts days suitable for fieldwork during prime planting time. This may cause several major problems which will substantially reduce corn yield potential.

Stand uniformity - Francis Childs, 5-time NCGA corn yield contest winner and world record holder (442 bu./a.), says "Root systems and uniform stands are the foundation of high corn yields." Variable plant spacing and seeding depth are common stand problems that can affect corn yield potential as much, or more than actual plant population. Corn plants are extremely sensitive to variable plant spacing because they do not tiller or produce branches to alter their plant size and only produce one fruit-bearing organ per plant, unlike most other crops. Crowded or late-emerging plants produce small, unfilled ears and spindly stalks due to intense competition for light, water and nutrients with adjacent plants. This reduces yield potential of the whole field, because these runts steal resources from their healthy neighbors. Planter meter system tune-up and calibration can certainly improve planter performance, but performance also depends heavily upon operator influence in the field. The most prevalent cause of seed distribution problems is excessive planter speed. Childs plants his corn at 2-4 mph. The standard maximum performance speed for plate and finger-pickup planters is 4.0-4.5 mph and vacuum-type planters is 4.5-5.0 mph. Speeds exceeding these values will usually cause much poorer seed spacing, increased double-drops, and less seed depth uniformity because seeds may roll and/or bounce in the seed furrow. Corn seed is available in numerous combinations of size and shape, which may also lead to planting problems. Growers with plate-type planters should match planter plates with their seed size. Likewise, growers with an air or vacuum-type planter should match disc or drum size, and air pressure with their seed weight/size. Excessive wear to planter plates, finger pick-ups or worn vacuum/drum seals can also cause major problems - just because something worked last year, doesn't necessarily mean it will this year.

Avoid Planting Wet Soils – Rainy springs not only encourage growers to plant quickly, but also tempt them to plant marginally wet fields, particularly when growers intend to plant a lot of acres. This often causes corn root development problems. Seed furrow openers will compact soil around the seed trench when planting into excessively moist soil. The soil shrinks when it dries, particularly in clay soils, causing the seed furrow to open and expose the nodal roots - just like shallow planting. These hard, compacted seed furrow walls also prohibit nodal root penetration, causing rootless corn syndrome, poor nutrient and water uptake and exacerbate root lodging at maturity.

Planting depth - Many "new" corn producers may plant corn the same depth as soybeans or even cotton. This can produce substantial seasonal root development problems. Corn seed should be planted 1 ½ - 2 inches deep. Planting depth should be set in the field during planting. This is important because soil type, seedbed condition and moisture may influence actual depth. Corn seed's inherent energy and germination process ensure emergence from depths as great as 3-inches. The initiation point of the nodal root system, the crown of the stem, is moved upward when corn seed is not planted deep enough. Corn seed placed less than 1-inch deep will develop nodal roots near or even above the soil surface. This potentially exposes these roots to factors such as hot, dry soil, herbicide injury, and insect predation which can significant impede root development. This often leads to standability problems, nutrient deficiencies and even drought stress throughout the year. Birds may also cause stand loss by extracting shallow planted corn seeds.

Starter fertilizer - Many corn growers utilize starter fertilizer to supplement their corn fertility program. Starter fertilizer enhances vigor, promotes earlier maturity and often improves grain yield, particularly in minimum or no-tillage systems. Starter fertilizer enhances growth primarily by providing a concentrated phosphorus supply in the root zone of young plants. Phosphorus placement is very important too young plants with small root systems because phosphorus is not mobile in the soil. Conversely, although nitrogen is an essential component of starter fertilizer, it is relatively mobile in the soil solution, so nitrogen placement is not vital to corn uptake, particularly since corn has a fibrous root system with considerable lateral growth. Thus, nitrogen fertilizers alone, have little value as starter fertilizers. The most commonly used source of starter fertilizer is ammonium polyphosphate (10-34-0 or 11-37-0). Orthophosphate fertilizers sold under many brands are also widely available, but are much more expensive, have lower nutrient analyses, and routinely show no yield difference compared to polyphosphate fertilizers in field trials. Growers applying starter fertilizer in the seed furrow should apply no more than 4 gallons per acre in 38 to 40-inch rows or 5 gallons per acre in 30-inch rows, or salting injury may occur to seedlings.

Bt refuge - Growers can plant no more than 50% of their corn acreage in Bt hybrids designed for corn borer resistance. This includes hybrids containing either YieldGard Corn Borer or Herculex 1. Growers will be required to plant an equal acreage of non-Bt corn as a refuge within a half-mile of their Bt corn. Neighbors' conventional corn does not count as refuge. The non-Bt refuge may be treated with insecticides (excluding sprayable Bt products) as needed. Thus, growers should plant their refuge as a separate block, so they may manage it separately, if infestation warrants insecticide treatment.

Corn continued...
by Dr. Erick Larson

Seeding Rate Suggestions – Corn growers should strive for a goal of 24,000 to 32,000 plants per acre. Seeding rates should exceed the desired plant population about 5 to 10% depending upon planting conditions, seedbed preparation, and seed germination. The desired plant population may vary depending upon a field's yield potential, planter row width and planting date. If a corn yield goal of 200 bu./a. (50 bu./a. soybeans or 2 bale cotton) is realistic, particularly under irrigation, then strive for 28,000-32,000 plants/acre. If this goal is unrealistic, then lower the seeding rate accordingly - do not generally exceed 28,000 plants/acre in dryland culture. Also, different row widths alter optimum plant population because it ultimately affects plant spacing. Close plant spacing increases competition for light, water and nutrients, which weakens stalk quality without increasing yield potential, particularly under stress. Thus, optimum plant population in wide rows is generally around 2,000 - 4,000 plants/acre less than narrow rows. Ultra-early planted corn (soil temperature 50-55 degrees F) should be seeded about 10% thicker than normal because cool spring conditions usually promote higher seedling mortality and smaller plants with less leaf area at tassel, meaning more plants are needed to intercept available light. Conversely, growers should reduce seeding rate at later planting dates since warm temperatures enhance seedling establishment and produce taller, leafier plants, but are more likely to expose the crop to late-season drought stress, decreasing grain yield potential. Refer to tables 1 and 2 for specific seeding rate suggestions depending upon these factors.

Early nitrogen application – Mississippi's warm, wet spring climate generally dictates timely nitrogen application according to crop demand (spoon-feeding), or substantial nitrogen may be lost prior to crop demand. Corn extracts less than 10% of its seasonal nitrogen uptake before rapid vegetative growth begins, which is normally after May 1. Thus, producers can improve their nitrogen use efficiency considerably by applying only a minimal portion of nitrogen shortly after emergence, followed by the bulk of their nitrogen fertilizer just prior to this period of maximum crop demand. Thus, early fertilization can waste considerable nitrogen, particularly if wet weather prevails, before rapid corn growth begins. Our standard nitrogen recommendation is to apply no more than 1/3 of the total N near planting/crop emergence and apply the remaining N about 30 days later (corn exceeding 12 inches tall or V6 growth stage).

Prevent stand loss - Growers who wait to apply a burndown herbicide near planting greatly increase their likelihood of experiencing stand loss from cutworms. Cutworms feed on green winter weed vegetation present in fields during the early spring. If a burndown herbicide is applied near planting, cutworms present will be forced to feed on new, emerging corn plants (because the weed vegetation is dying from the herbicide application). Thus, growers should apply a labeled pyrethroid before corn emergence or with the burndown herbicide to control cutworms, unless a labeled insecticide is applied in a band at planting. Pyrethroids intended for cutworm control should be applied on the soil surface, rather than in-furrow (with a starter fertilizer), since surface treatment offer more exposure to cutworms. Seed treatments may require a supplemental pyrethroid application to enhance cutworm control, because they generally do only a modest job on cutworms.

Table 1. **Dryland** corn seeding recommendations.

	Planter Row Width			Final Stand	
	30-inch	38-inch	40-inch		
Seeding Rate	Seed Spacing (inches)			@10% loss	@5% loss
24000	8.7	6.9	6.5	21600	22800
26000	8.0	6.3	6.0	23400	24700
28000	7.5	5.9	5.6	25200	26600
30000	7.0	5.5	5.2	27000	28500
32000	6.5	5.2	4.9	28800	30400
34000	6.1	4.9	4.6	30600	32300
36000	5.8	4.6	4.4	32400	34200

Suggestions dependent upon relative planting date:

Ultra-early planting dates
Optimum planting dates
Late planting dates

Table 2. **Irrigated** corn seeding recommendations.

	Planter Row Width			Final Stand	
	30-inch	38-inch	40-inch		
Seeding Rate	Seed Spacing (inches)			@10% loss	@5% loss
24000	8.7	6.9	6.5	21600	22800
26000	8.0	6.3	6.0	23400	24700
28000	7.5	5.9	5.6	25200	26600
30000	7.0	5.5	5.2	27000	28500
32000	6.5	5.2	4.9	28800	30400
34000	6.1	4.9	4.6	30600	32300
36000	5.8	4.6	4.4	32400	34200

Suggestions dependent upon relative planting date:

Ultra-early planting dates
Optimum planting dates
Late planting dates

Irrigation Decisions for Double Crop Soybeans by Jim Thomas

There could be some difficult decisions to make this year with the wheat that is planted that may go into soybeans after harvest. One of the first decisions, should it be a dry harvest time, is how to get moisture to plant soybeans in after the wheat is cut. Normal June rainfall for the Delta area is about 4.5 inches. Hopefully, this will be a somewhat normal year and there will be enough moisture to germinate and sustain double-crop soybeans in June. However, if there is insufficient moisture, there are some considerations that will need to be made.

Many preparations should already be in place for irrigated double crop beans this summer. This means wheat should be established on raised beds for furrow irrigated fields. If the beans will be planted flat, this will make any pre-irrigation or germination irrigation very difficult, unless a center pivot is present. After wheat harvest, maintain as much crop residue as possible to help shade and keep the soil cool during early irrigations. High soil temperatures greatly increase the risk of stand failure during June, particularly if soil moisture is marginal. Residue can help reduce soil temperatures by shading and should not interfere with good emergence or stand establishment.

If soils are too dry for seed germination, there are two management strategies. One is to plant the crop and hope for rain and if it doesn't rain, then irrigate the crop up. The other, is to pre-irrigate the field, then subsequently plant. Either system can work or fail depending upon environmental conditions. The problem in the Mississippi Delta is that conditions are always an unknown until planting time.

If a producer chooses to plant into dry soil and does not get a rain, either a sprinkler or furrow irrigation system can supply moisture for germination. If a pivot is used, then enough water needs to be applied to successfully germinate and establish the seedlings. This will typically require an inch or more of water. If the soil surface begins to crust because of hot dry conditions, subsequent light irrigations may be needed to soften the crust and promote seedling emergence. This should be done frequent enough to establish a good stand, then stopped. When sunny, hot weather is prevalent, hot, wet soil may scald and/or rot the seed or seedlings, thus reducing the likelihood of successful germination and stand establishment. Under extreme conditions, the best method with center-pivots is probably subsequent light irrigations to reduce soil temperature and minimize soil crusting.

In furrow irrigated fields, furrows must already be established to effectively irrigate. If furrows do not exist, it will be very hard to get rid of stubble, row up, plant, and pre-water in a timely manner. With furrow irrigated fields, there generally needs to be adequate soil moisture at planting to successfully germinate and establish the seedlings. Thus, growers should make sure moisture is present in the planting zone, because some soils do not wick moisture well.

If pre-irrigation is utilized, there are still concerns that should be addressed. Furrows need to have sufficient depth to allow uniform water flow, particularly if heavy crop residue is present, to assure good moisture distribution across the field. Pre-watering the beds prior to planting, will typically improve the likelihood of stand establishment, compared to watering a crop up after planting. However, this will delay planting as much as a week in some cases, or even longer, because the ground will have to dry substantially before planting can proceed. Although this system is preferred, there is still considerable stand establishment risk.

Burning wheat stubble may create more problems than leaving it present. Burning residue and charring the soil surface will sometimes make the soil hydrophobic (afraid of water). Thus, water infiltration may be reduced temporarily. Furthermore, the dark, charred residue on the soil surface will absorb tremendous solar radiation. This will substantially heat soil temperature to levels where seedling establishment may be difficult. After burning, light tillage prior to planting may reduce this detrimental effect.

Stand establishment may vary considerably when trying to irrigate a crop up or pre-irrigate for planting. To be most successful, be timely with the water, don't wait too long, and get water on and off the field as quickly as possible. Also, keep in mind that if the soil profile is dry, subsequent irrigation will likely need to be initiated much quicker after emergence, than when planting during the normal time frame.

Flood irrigating small beans is an extremely risky venture. Generally, we do not suggest flooding soybeans until they are a foot tall or more. However, that may be impractical when conditions are extremely dry. Smaller soybeans are more intolerant of saturated soil and are extremely susceptible when submerged in stagnant water, particularly when temperatures are hot. Therefore, pre-watering flood irrigated fields would likely be more preferable, than early post-emergence irrigation. Successful utilization of this system is quite dependent upon draining excessive water following application. This is often referred to as flushing, rather than flooding.

Forages
by Dr. David Lang

Early Summer Grazing

The drought during the summer of 2006 has left many of you without any hay. Winter forage growth has suffered recently due to cold weather, though most areas received sufficient fall rains to get reasonable fall growth of annual ryegrass and tall fescue. These cool season grasses can generally survive a cold snap down to 10^{o}F and they start growing again once the night time lows are back in the upper 20's and daytime highs are greater than 40^{o}F. This occurred for most of the state by mid-February so by the time you read this in March you should have plenty of spring forage if you planted ryegrass or have tall fescue. The cold weather we've had over the winter of 2006-2007 has not been severe enough to damage bermudagrass or bahiagrass in most situations. The key to winter survival of bermudagrass and bahiagrass is to maintain soil potash levels in the medium range on a soil test.

Both of these perennial summer grasses can begin to grow by mid-March throughout most of the state of Mississippi if they do not have a winter cover of clovers, ryegrass or tall fescue. It's good to over seed some of your perennial summer grasses to annual clovers and ryegrass, but be sure to have a few pastures that are not over seeded next fall so that you can have early summer grazing. Both ryegrass and tall fescue suppress early summer growth due to shading. Summer grasses love full sunlight and need to have the cool season forage grazed closely as early as possible to stimulate vigorous growth.

Annual summer grasses can provide early grazing or hay. There are several millet species and varieties but the best millet to plant is pearl millet. Browntop millet is a separate species suitable for wildlife that grows quickly and yields much less than pearl millet. It makes for a good dove field in September if planted around the first of July. Sudangrass is another highly productive fast growing summer annual that can provide early summer grazing. Look for a variety that has the brown mid-rib gene for higher digestibility. Both pearl millet and sudangrass can be planted from early April to June from south to north in the state. Millets and sudangrass can be drilled into a lightly disked seedbed with good success.

Sudangrass has a potential cyanide or prussic acid toxicity problem during summer drought or after a frost in the fall so use caution with this grass. Nitrates can also accumulate in millets and sudangrass if nitrogen is applied at greater than 70-80 lbs (units) of actual N per acre per application, particularly in drought conditions.

Another summer annual to consider is corn. It can be utilized as forage when vegetative if you can find a cheap source of seed. Try using the brown bag wildlife corn from the local coop. It's not the best genetically for grain and you should never use it for silage or grain production, but if it's not cracked or more than a season old then it will germinate up to 70%. Again it's always best to buy certified corn seed for grain or silage production because of the hybrid nature of corn. Wildlife or feed corn from the coop may not work so try it sparingly or only after you've confirmed seed viability with a quick germination test. Roll some of the kernels into a paper napkin and keep it moist in a warm place such as on a plate in the kitchen. If the seed is viable it will begin to sprout in a few days. This source of seed is only to be used if you utilize corn vegetatively for early season emergency grazing. It can be planted beginning in early March to April from south to north in the state. A grain drill can be suitable for this purpose. Block every other hole with tape to plant corn in 12 to 16 inch rows.

Nutrient and Soil Management
by Dr. Larry Oldham

Occasionally there are inquiries about locating gypsum (calcium sulfate) or dolomitic lime (contains magnesium) from places in Mississippi where our soil testing history indicates soil amendment with either calcium or magnesium is unnecessary, or inappropriate for the crop indicated, or dolomite prices are rather expensive. Often follow-up questions indicate a desire to adjust the cation ratio in the soil. Soil test recommendations from soil analysis rely on basic philosophies. Most, if not all, land grant university recommendations seek to provide sufficient crop nutrients for a crop based on critical values of the nutrient in the soil. These recommendations are based on field calibration and correlation studies.

Some private laboratories and consultants use a Basic Cation Saturation Ratio philosophy that there exists an ideal 'mix' of nutrients in the soil. This concept originated in a series of papers in the 1940's from New Jersey that advocated the exchangeable cation saturation in a productive soil be 65% calcium and 10% magnesium. Other formulations have been proposed as well.

Trials in Wisconsin, Ohio, and more recently Missouri have not shown the advantages reported in the earlier New Jersey papers. However, some persist that maintaining a certain ratio of Ca and Mg in the soil exchange complex results in better crop growth and nutrition. Figure 1 is cotton yields over two years in the Delta section of Missouri in a soil which had been amended to attain Ca to Mg ratios ranging from 2.5:1 to 7.6:1. It shows that yields were not a function of the ratio. (Complete information is available in Stevens et al., Journal of Cotton Science 9:65-71.)

In the Stevens study referenced above, whole plant potassium uptake by cotton was measured at first square over three seasons and was not different across the range of Ca/Mg ratios (Figure 2, which is Figure 3 of the publication). There was also no effect on fiber quality.

Within plant cells, magnesium does not bind as strongly as calcium or potassium to the cell walls. This competition can lead to lower uptake of magnesium in situations with high calcium or potassium. Potassium induced magnesium deficiency has been diagnosed in very few situations in Mississippi over the past thirty years. One such situation arose in the south Delta in a corn field a few years ago, but it was unique because soil test potassium levels (i.e. exchangeable potassium) were very high. Since the soil was almost pure sand with a very low cation exchange capacity, this was not a base percentage issue but a sheer quantity problem.

This is not to say categorically that no Mississippi soil fertility situation exists which could not benefit from gypsum or dolomite amendment. Gypsum is very useful when additional calcium is needed for some crops. It also helps with certain structural issues, and is the amendment of choice on salt affected soils such as those affected by hurricane storm surge. Dolomite is an excellent liming material, and the material of choice in some parts of the state not close to water or rail transportation hubs. In summary, be aware of why some recommendations are made, and use only those which are attributable to research and profitable for your situation.

Figure 1. Average lint yields of two years as a function of magnesium saturation of soil cation exchange capacity (University of Missouri, graph courtesy of David Dunn).

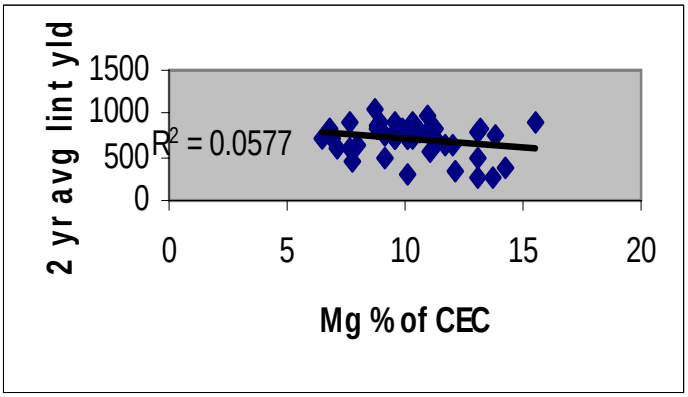


Figure 2. Potassium uptake at pinhead square over a range of soil calcium/magnesium ratios (University of Missouri, graph courtesy of David Dunn).

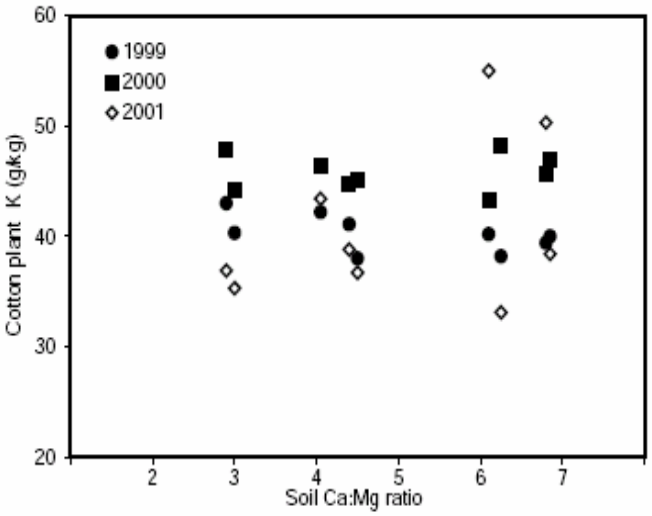


Figure 3. Effect of soil exchangeable Ca:Mg on whole plant tissue K at first square from the long-term Ca:Mg ratio experiment. Each dot represents the mean of four replications.

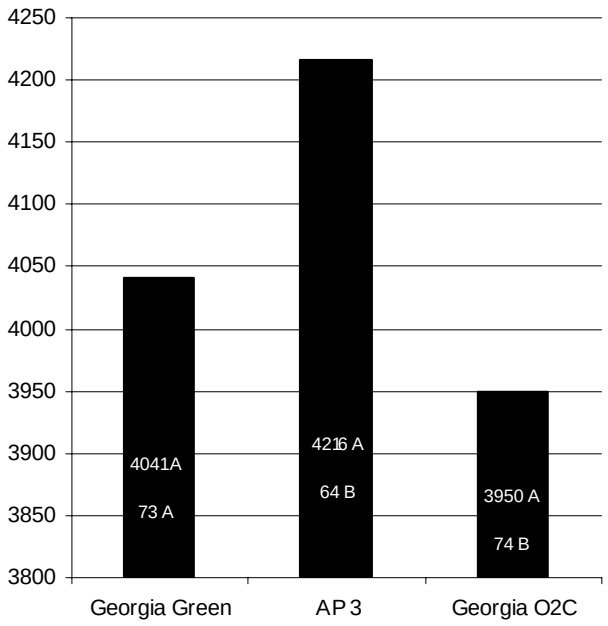
Peanuts
by Mr. Mike Howell

Planting time is just around the corner, but growers don't need to hurry with peanuts. Data from other states indicates that optimum planting time for peanuts is May 10-15, and peanuts really don't need to be planted before May 1. That may seem like a long time away, but there is much to do in the meantime.

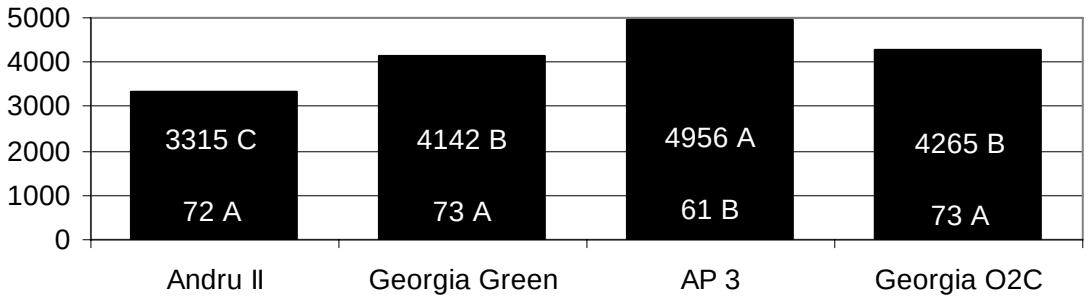
Plan your planting date - Remember that you will only be able to harvest 20-25 acres per day. If a grower plants 400 acres in a 4-5 day window, this will lead to problems at harvest. Peanuts put on 70% of their weight in the last 10 days of maturity, and once the peanut plant matures, you have about 10 days to harvest before you loose yield. With this tight timeline, it is imperative that you look at time to maturity for each variety you are planting, and work out a plan on the calendar as to when you should plant and harvest. This won't be an exact timing, but it will help to spread out harvest.

Variety Selection - If you have not already done so, now is the time to choose your varieties and get the deed ordered. It is recommended that growers plant several different varieties to help manage risk and to evaluate what will perform best on their farm. Below are the results form some of the variety testing plots in Mississippi in 2006. Georgia Green has been the standard for many years in the Southeast, and are still grown on a large percentage of the acres. In recent years, there have been some new varieties released that offer higher yield potential and/or better disease resistance. AP3 is one of the newer varieties that is an excellent yielder, however there are some quality issues that growers must take into account. Georgia O2C has yielded well in trials in Mississippi, and has grades comparable to Georgia Green, however it is a longer season variety. It is sold as a 150 maturity, but in many cases it will take 160+ days to mature. North of I-20 it would be extremely risky to plant many acres of this variety. Growers in the northern portion of the state should look at some of the earlier maturing varieties such as Andru II, Viragard, and Carver. Yields of these varieties in other state variety trials usually don't measure up to Georgia Green, but the earliness is a definite benefit.

Mean Yield and Grade of Peanut Varieties
Lawrence Farms, Lucedale, MS, 2006



Mean Yield and Grade of Peanut Varieties
Lonnie Fortner, Vicksburg, MS, 2006



Rice

by Dr. Nathan Buehring

Over the last year, the rice industry has been faced a lot of drama with high emotions at times. From glyphosate drift to GMO's, this has been a year that will be remembered. As I write this, the outlook on CL 131 does not look good. I have been somewhat reluctant to say much because there is still some uncertainty on whether or not CL 131 will be sold for production in 2007. If CL 131 is not grown in 2007, 250,000 acres or more could be lost in Mississippi and Arkansas. Mississippi's rice acres could be reduced to the lowest in 30 years. With the loss of Cheniere and possibly CL 131, which were grown on almost 50% of the acres in 2006, there will be a shift in rice varieties. Due to seed availability, Cocodrie will probably be grown on 75% acres in Mississippi. There is only a limited supply of other varieties such as Wells, CL 161, Sabine, and Hidalgo. Although there is the possibility of limited seed supply in 2007, I still believe there is enough seed available in Mississippi to meet the producer's needs.

Seeding Rates - With a possible limited seed supply, many questions have been brought up on seeding rates. Under optimal seedbed conditions (smooth soil surface and adequate soil moisture), 30 seed/ft^2 can be planted to achieve maximum yields. Under less than ideal conditions, the seeding rate should be increased to 36 seed/ft^2.

Table 1. Optimum seeding rates for selected varieties.

Variety	Seedbed Condition		
	Good	Fair	Poor
	---------- (lb/A)----------		
Cocodrie	75	83	90
CL 161	70	75	82
Sabine	77	84	91
Wells	70	75	82

Seed Treatment Recommendations - I have strongly been encouraging a good seed treatment for this upcoming year. Protection from *Pythium* seedling diseases is the main concern in rice. Products such as Apron XL LS and Allegience have been doing a good job in giving us protection from *Pythium*. Apron XL LS is recommended at a rate of 0.32 to 0.64 fl oz/cwt and Allegience is recommended at rate of 0.75 to 1.5 fl oz/cwt. *Rhizoctonia solani* is another concern in rice. Products such as Maxim, Dynasty, or Trilex need to be considered for protection against *Rhizoctonia solani*.

I have also been encouraging producers to treat their seed with gibberellic acid (GA). GA treated seed has shown to be a benefit for uniform emergence, and an increased speed of germination and emergence.

To receive Agronomy Notes via email, please contact Tammy Scott at (662) 325-2701.

Mississippi State University Extension Service

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