June 2008

Mississippi State University Extension Service

Agronomy Notes

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Corn
by Dr. Erick Larson

Emergency Nitrogen Topdressing - Rainfall and/or other limitations compounded by wet weather during this spring, have delayed nitrogen fertilizer application for some corn growers, making side-dressing no longer possible, because the crop is now too tall to permit ground equipment passage. Thus, these growers must generally apply their remaining nitrogen by airplane or high clearance applicator.

Proper Timing - Proper timing for emergency nitrogen applications depend primarily upon crop health and growth stage. If the crop is lime green or lower leaves are turning yellow and firing up (nitrogen deficient), then nitrogen fertilizer application should proceed as quickly as possible. We do not suggest applying nitrogen fertilizer when soils are completely saturated, flooded or ponded, because anaerobic conditions stunt crop growth/response and promote nitrogen loss. However, **you do not have to wait for the soil surface to completely dry or crust before application, if the crop is nitrogen deficient,** particularly if there is a high likelihood of subsequent rainfall (to incorporate the nitrogen) and the soil is well-drained. Prolonged nitrogen deficiency during rapid vegetative stages, which is when nitrogen demand is highest, is going to reduce corn grain yield potential considerably. If the crop is dark green, then you have slightly more latitude to wait for “ideal” application conditions. Fertilizer application should generally commence well before tassel stage, so rainfall can incorporate the nitrogen into the soil and plants can use it and improve their health, before kernel development begins.

Leaf Burn - The primary limitation with applying granular nitrogen fertilizer during mid-season is leaf burn resulting from fertilizer granules falling into leaf whorls. Thus, **broadcast application should be limited to 100 to 150 pounds of granular nitrogen fertilizer material per acre on corn more than 3 feet tall.** Avoid fertilizer application when leaves are wet with dew or rain, because moisture encourages fertilizer granules to stick to leaves and promote burn. Many will likely need to make two applications to attain the nitrogen needed for the crop, rather than applying one large application (200 to 300+ pounds of fertilizer material/a. – or about 70 to 150 lbs./a. of N). Delaying the second application a week or more will spread a reasonable amount of burn on different leaves, rather than causing severe burn on concentrated leaves.

N Rates - When topdressing nitrogen later than normal, you should be able to use more conservative fertilizer rates than normal (about 1 pound or less of actual N per bushel of corn grain yield goal). Plants should use the nitrogen very efficiently, since they are already rapidly using nitrogen during late vegetative stages. Furthermore, if the crop has been deficient for long, normal yields are no longer likely, so full rates are not necessary.

N Sources - Two sources of granular nitrogen fertilizer are generally most feasible for mid-season topdress application on corn – ammonium nitrate and urea. Ammonium nitrate is generally the preferred nitrogen source because it is not subject to volatilize, compared to urea. When urea is broadcast on the soil, it reacts with the enzyme urease converting it to ammonia. If this process occurs on the soil surface, particularly if crop residue is present, ammonia is lost in the air as a gas in the air (volatilization). Rainfall or tillage is needed to incorporate urea into the soil where ammonia becomes ammonium and binds to the soil. Volatility can be a more important problem during the early summer, compared to early spring applications on wheat, because warm temperatures and rapid evaporation encourage nitrogen loss. You can reduce volatility by adding urease inhibitors, such as Agrotain, to granular urea. Urease inhibitors temporarily slow the activity of the urease enzyme. But you’ll still need timely rainfall or overhead irrigation to get urea-based N into the soil so the plants can use it. Foliar nitrogen fertilizers and lower analysis nitrogen sources are not feasible for these situations because they cannot economically supply sufficient nitrogen to meet crop demand.

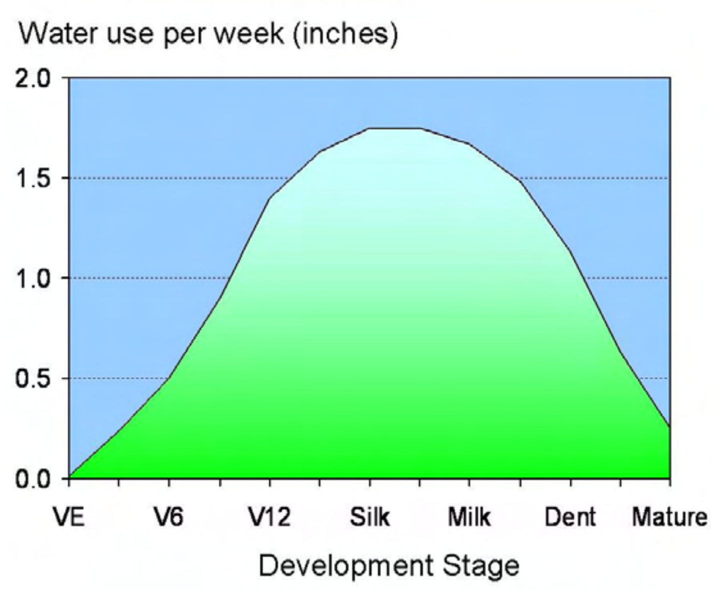
Figure 1. Leaf burn caused by granular N fertilizer initially appears bad, but the relatively small loss of leaf area is far less troublesome than mid-season N deficiency.

Corn continued...
by Dr. Erick Larson

Corn Growth Stage ID - Corn growth stage identification during vegetative stages is typically classified according the number of fully emerged leaves with visible leaf collars. However, after plants exceed V6 stage, stalk elongation and natural lower leaf degeneration occur, causing the lower (eventually three to four) leaves to fall off or be torn from the stalk. This makes growth stage identification more difficult during the later vegetative stages approaching tassel. However, absolute accuracy of specific advanced vegetative stages is not normally critical for many management decisions. In order to help judge approximate timing until tassel emergence, I would generally recommend using plant height, movement of the tassel to the upper whorl and the emergence of upper ear shoots as clues that pollination is rapidly approaching. Corn about six feet tall or more is generally two weeks or less from tasseling. You can likely begin finding upper ear shoots tips starting to emerge and swell about 7-10 days prior to silking. Tasseling (VT) is defined as when all tassels and leaves have completely emerged, but ear silks are not yet visible. Silk emergence closely follows VT (within 2 to 3 days), so that tassels shed pollen when receptive silks are present. Silks generally remain receptive to pollen for about 10 days, then dry and turn brown as pollinated kernels develop into the blister stage (R2).

Critical time for rainfall/irrigation - Although most of Mississippi has experienced plentiful rainfall through this spring until this time, moisture deficit can quickly arise with the corn crop now reaching peak water usage. Corn's most critical and largest moisture requirement occurs during a four week period following tasseling, which will occur during June through mid to late-July for most of Mississippi's crop. Potential corn yield can be reduced up to 4 - 8 percent per day due to water deficit during this period. Thus, insufficient irrigation water and/or slight delays can quickly reduce yield potential and evaporate profitability. Corn plants use about 1.50-1.75 inches of water per week during peak water use, so producers nearly always must supplement rainfall with irrigation to meet crop demand during this extremely critical period. Furthermore, growers should anticipate this demand so they don't fall behind when it peaks, especially with center-pivot irrigation systems. Unfortunately, most center-pivot systems in our region were not designed to fully support crop demand without some rainfall to help them out. Thus, irrigators need to start early, so that subsoil moisture can be recharged somewhat, before peak water demand begins.

Figure 2. Corn weekly water use during the growing season.



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.

Forages
by Dr. Rocky Lemus

Approximately 80% of the pastures in Mississippi (MS) suffer from poor and uneven fertility coupled with serious weed management. Close to 90% of the pastures are under continuous grazing, with more than 50% of the forage production being underutilized. To improve the grazing systems in MS, it is necessary to balance the livestock demand with forage availability to promote rapid pasture re-growth (recovery) and increase the opportunity for long-term pasture persistence.

What are the main types of grazing systems?

There are two main types of grazing systems that could be utilized: continuous and rotational grazing. Each grazing system has advantages and disadvantages. The approach, style, and success of a grazing system depends on many factors such as land configuration, type of livestock, capital resources, and the producer's goals, attitude, and ability to adapt the daily challenges of the system chosen.

Continuous grazing is usually defined as putting a set of animals out on a pasture and leaving them in the same pasture year-round. Continuous grazing usually leads to the overgrazing of specific areas due livestock selectivity and causing issues with fertility and weed control. Under continuous grazing, the number of animals that could graze a specific area should be determined by the available forage yield during the lowest pasture production; usually from July to October depending on the area of the state. Some of the drawbacks that could seeing with this grazing system include low animal gain per acre, waste of forage biomass and quality, and selective grazing cause the pasture to become less productive with time and the loss of desirable species.

Rotational grazing involves fencing a pasture into several small area or paddocks. Subdividing the pastures is a good way to balance livestock needs with forage supply. Under this type of grazing system, the livestock graze the paddocks in a sequence and they are moved to a new paddock once the forage is ready for grazing. This type of system allows plants maintaining a more vegetative stage and better forage quality. When using rotational grazing, allow the grass to reach 10 to 12 inches in height before grazing and remove the livestock when the pasture is grazed down to 3 to 4 inches (**Table 1**). Using relative high stocking rates in each paddock will force animals to be less selective and graze the paddock more uniformly. By divining the pasture into small paddocks, grass could be harvested for hay early in the season while forage production is abundant. Hay could be used as emergency forage in case of drought during the summer or for winter feeding. Do not cut hay late in the season since it will cause a delay in the pasture rotation and can put an extra pressure on the areas being grazed. Rotational grazing does not necessarily increase animal daily gains, but does allow a higher stocking rates to be carried, which increases animal gain per acre.

There are different types of rotational grazing systems that could be incorporated into a livestock operation. They include strip grazing, forward grazing, mixed grazing, and mob grazing [Intensive Rotational Grazing (IRG) or Management Intensive Grazing (MIG)].

Strip Grazing – The animals will receive enough pasture supply to sustain grazing from several hours to a couple of days depending on the forage species by utilizing movable

Table 1. Suggested residue height, rest period, and possible maximum forage utilization of selected forages.

Species	Residue Height (inches)	Rest Period (days)	Maximum Utilization (%)
Alfalfa	3 – 6	15 – 30	50
Annual Ryegrass	3 – 4	7 – 15	75
Arrowleaf Clover	3 – 4	10 - 20	50
Bahiagrass	4 – 6	10 - 20	60
Bermudagrass	3 – 4	7 - 15	75
Oat	4 – 6	7 – 15	75
Red Clover	4 – 6	10 – 20	50
Rye	4 – 6	7 – 15	75
Tall Fescue	3 – 4	15 - 30	75
Wheat	4 – 6	7 – 15	75
White Clover	4 – 6	7 – 15	75

electric fences. It is important that when using strip grazing animals start grazing close to the water source to avoid trampling of the forage when returning to the water source. This grazing method is labor intensive because electrical fences have to be moved frequently, but it results in the utilization of high quality feed with the least waste and damage to a pasture.

Forward Grazing – The pasture is grazed by two groups of animals within the same species. Usually young animals or animals with higher nutritional needs are allowed to graze the top of the plants first with the most nutritional leaves. The second group of animals then will graze the forage left by the first group. This is a situation where calves might be grazing before cows. This method could give an advantage to higher weaning weights when forage production might be limited or where competition for forage might exist. Forward grazing is usually accomplished by using creep gates or by setting fences high enough for the young animal to pass underneath.

Mixed Grazing – Common method practiced by producers that might have different types of livestock (e.g. horses, cattle, sheep, or goat) in the grazing at the same time in the same pasture. This type of management offers the opportunity to graze plants more evenly since one type of livestock might graze plants not grazed by the other group. Usually sheep and cattle are an ideal combination for this type of grazing system. It is not recommended to graze sheep and horses together since they are considered non-selective animals and could affect forage production and persistence of favorable species.

Forages continued...
by Dr. Rocky Lemus

Mob Grazing – A rotational grazing system gaining a lot of interest and it requires the pasture being divided into numerous paddocks, enabling hourly to daily animal rotation among paddocks. This type of system is also known as MIG. High stocking rates can be grazed in the paddocks until the forage is grazed down evenly and closely. Stocking density could range from 100 to 400 heads/acre depending on the management of the operation. This management system emphasizes more management of forage consumption, quality, and re-growth. Paddocks are grazed on the basis of growth and quality, but not always in the same order.

Setting up a Rotational Grazing System

One of the first questions asked when developing a rotation grazing system is how many paddocks are needed? A common rotational grazing system usually has 2 to 4 paddocks in which animals graze the paddock for about 7 days or longer and then are moved to the next paddock. In a more practical manner, the actual number of paddocks will depend on the rest period that the paddock will receive. In most cases, a rest period of 10 to 30 days during each cycle is recommended depending on the forage species being utilized. More paddocks means increasing the length on the rest period and decreasing the length of time an area is grazed (**Figure 1**). Other things that need to be considered when developing a rotational grazing system include: (1) conditions of the pastures, (2) the amount of forage available (See Extension Publication **P-2458**), (3) estimated seasonal growth rates of existing forage species, (4) the number and nutritional needs of the livestock, (5) fencing requirements, and (6) water sources and placement.

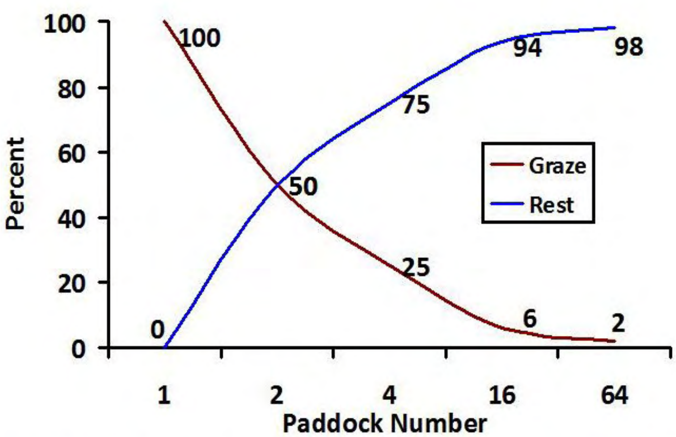


Figure 1. Relationship between paddock number and rest period for a 100-acre field dived into 2 paddocks (50 acres/paddock), 4 paddocks (25 acres/paddock), 16 paddocks (6.25 acres/paddock) and 64 paddocks (1.57 acres/paddock).

Steps to Developing an effective Rotational Grazing:
For this example, it is assumed that 100 heads of stocker calves weighing 500 lbs each and having a daily dry matter intake (DMI) of 3% their body weight will be used in the rotation system. Average forage dry matter (DM) production in the farm is 2000 lb/ac and animals will efficiently graze (GE) 60% of the pasture. The producer will graze the pasture for 4 days with a rest period of 28 days (grazing days can be calculated using equation in step 1 if forage production is known).

1. Determining the amount of grazing days.

$$\text{Days} = \frac{\text{Total Forage (lb/ac)} \times \text{Acres} \times \text{Grazing Efficiency (\%)}}{\text{Animal Weight (lbs)} \times \text{Intake Rate (\% Body weight)} \times \text{Number of Animals}}$$

Forage Utilization or Grazing Efficiency:
- Continuous grazing: ~30 to 35%.
- Rotational grazing: ~50 and 75%.

2. Calculating the number of paddocks.

$$\textbf{Number of paddocks} = \frac{\textbf{days of rest}}{\textbf{days of grazing}} + \textbf{1}$$

Example:

$$\text{Number of paddocks} = \frac{\text{28 days rest}}{\text{4 days grazing}} + 1 = \textbf{8 paddocks}$$

3. Calculating acres required per paddock.

$$\textbf{Acres required per paddock} = \frac{\textbf{weight (lbs)} \times \textbf{DMI} \times \textbf{animal Number} \times \textbf{days per paddock}}{\textbf{DM (lb)/acre} \times \textbf{\% utilization}}$$

Example:

$$\text{Acres required per paddock} = = \frac{\text{500 lb} \times 3\% \times \text{100 head} \times \text{4 days}}{\text{2,000 lb/acre} \times 60\%} = \text{5 acres}$$

4. Calculating total acres requires per grazing cycle.

Total acres required per grazing cycle = number of paddocks x acre required/paddock

Example:

Total acres required per grazing cycle = 8 paddocks x 5 acres/paddock = 40 acres

5. Calculating stocking rates.

$$\textbf{Stocking rate} = \frac{\textbf{number of animals to be grazed}}{\textbf{total acres grazed}}$$

Example:

$$\text{Stocking rate} = \frac{\text{100 heads}}{\text{40 acres}} = \textbf{2.5 head per acre}$$

6. Calculating stocking density

$$\textbf{Stocking density} = \frac{\textbf{number of animals grazing on a paddock}}{\textbf{paddock size (acres)}}$$

Example:

$$\text{Stocking density} = \frac{\text{100 heads}}{\text{5 acres}} = \textbf{20 heads/acres}$$

Nutrient and Soil Management by Dr. Larry Oldham

In normal times, whatever that is, the price of nitrogen fertilizers is closely tied to the price of natural gas. In May, that price started trending upward because of the overall energy market situation. Therefore, in addition to supply and substitute material issues, N fertilizer prices likely will challenge producers this summer sidedress season for row crops or pastures and forages.

Remember that due to security concerns, some 34-0-0 sold today is not ammonium nitrate, commonly it is a mixture that is 50% ammonium sulfate and 50% urea. Which is 34-0-0, however it has management concerns stemming from the materials that do not go away with the blending. Urea applied to warm soils and not incorporated by rain or machine is subject to volatilization, another way of saying it disappears into the air. Ammonium sulfate acidifies soils when applied, so it may compound existing soil acidity issues.

I recently ran across some 'older' data from Louisiana for N application rates on Bermudagrass using ammonium nitrate or urea. Across rates, four applications of ammonium nitrate yielded 15.6 tons versus 12.9 tons using urea on a Ruston soil. On a Darley soil, ammonium nitrate outyielded urea by 0.9 tons. While ammonium nitrate may not be available, be aware there can be a difference using urea or UAN solutions in surface applications.

The much discussed alternative (which is the standard for many people in south central Mississippi) is poultry litter. We are fortunate to have a good supply in the state from our broiler farms. There has been significant recent effort expended on learning to better manage it both economically and environmentally. Poultry house management has evolved to fewer total cleanouts, however there is still significant material moved out of them. The problem is getting it moved from Point A to Point B.

The Mississippi Farm Bureau Federation has a 'clearing house' on their web site for poultry growers with available litter and people wanting it to make contact at http://msfb.net/PCH.aspx. Remember that if you do not have computer access, each MSU Extension Service office will be glad to help you.

What is it worth, the question we get all the time? Buyer and seller will have to decide. Doubling and tripling inorganic fertilizer prices in the past year has made pricing trickier than ever.

What is the nutrient content? This is easier to determine than the value. The best case is to have a recent nutrient analysis of the actual material being traded as Mississippi research has shown that nutrient content varies by integrator, number of flocks grown on it, and other factors.

The table below summarizes fertilizer content from recent work on broiler litter content. This is reported 'as is' meaning there is no moisture correction. The Mississippi survey work found litter averaged about 19% moisture in the state. However, this way allows an informed speculation about the nutrient content per ton, spreader load, or truck load. (It weighs about 31 pounds per cubic foot.)

	as is, per ton		
	N	P_2O_5	K_2O
Alabama	54	27	44
Georgia	63	55	47
Mississippi	62	31	63
Texas	57	71	61

If you are thinking of using broiler litter as a fertilizer alternative in 2009 row crop production, start working to find it this summer. Broiler litter is an effective nutrient source in these crops, but planning is key for effectiveness. Mississippi NRCS has had a cost-share program the past two years under EQIP for transporting litter out of poultry counties to counties without commercial scale poultry. Unfortunately, some bid on these contracts without a source in place, so they were scrambling in 2008. If the program is renewed, be prepared for it.

Cotton
by: Dr. Darrin Dodds

Cotton Growth and Development: Vegetative growth of a cotton plant is necessary to support reproductive growth. However, excessive vegetative growth can lead to problems such as increased fruit abortion, delayed crop maturity, boll rot, and reduced harvest efficiency. There are many factors that can contribute to fruit abortion including excessive nitrogen fertilization, root pruning from cultivation, and shading of the lower canopy. A cotton plant will develop fruit in an ordered pattern beginning at the bottom of the plant and continuing on upper and outer portions of the plant as the growing season progresses. A cotton plant will attempt to compensate for fruit loss in the lower canopy by developing fruit in upper and outer fruiting positions when favorable growing conditions exist. However, development of fruit in these upper and outer fruiting positions may delay maturity. Additionally, boll size is strongly related to fruiting position on the plant. Generally, the largest bolls will occur at nodes 10 – 16 in the first and second fruiting positions. Cotton bolls set at upper and outer fruiting positions tend to be smaller than those produced at lower fruiting sites on the plant. Excessive shading of the lower canopy can reduce penetration of insecticides and herbicides leading to reduced yields. Generally, a plant that is smaller and more compact will be easier to harvest compared to a larger plant.

Plant Growth Regulators: Research has been conducted for several decades on limiting the amount of vegetative growth of the cotton plant. Mepiquat containing products are currently utilized by many cotton producers to limit vegetative growth. The application of mepiquat to cotton plants can reduce the total number of mainstem nodes, reduce leaf area, increase leaf thickness, and produce a more compact fruiting zone. Generally, plants treated with mepiquat are shorter, more compact, and are darker green in color than plants that are not treated with mepiquat. However, yield response due to application of mepiquat is inconsistent. Yield effects due to application of mepiquat are generally negligible if early fruit retention is high. Positive effects on yield may be observed when excessive vegetative growth and/or reduced fruit retention are present. Negative yield effects due to application of mepiquat may be observed when applications are made to cotton plants under stress or when excessive rates are used.

Mepiquat Products: Mepiquat chloride has been available since the 1980's and is widely used in cotton production. Mepiquat chloride is sold under several trade names and is generally absorbed into the plant in four to eight hours. Mepiquat pentaborate has been recently introduced and is sold under the trade name Pentia®. There appears to be more active ingredient in Pentia®; however, the pentaborate salt is heavier than the chloride salt contained in mepiquat chloride products. Mepiquat chloride and mepiquat pentaborate products generally contain the same amount of mepiquat. One of the newer products available is Stance®. Stance® is a combination of mepiquat chloride and cyclanilide. Cyclanilide is thought to act as a synergist and functions as an auxin transport and synthesis inhibitor. Use rates of Stance® are substantially lower than those of other mepiquat products. Cotton Specialists from across the Cotton Belt have been evaluating several of the mepiquat products. Products tested are presented in Table 1 and results are presented in Tables 2 – 3 and Figure 1. Based on preliminary data available from these studies, there appear to be no major differences among products tested in regard to cotton growth regulation, fiber quality, and yield.

Table 1. Plant growth regulator products examined in Beltwide studies.

Product	Rate	Application Timing
Mepex fb	8 oz/A	Matchhead Square (MHS)
Mepex	10 oz/A	2 Weeks After Initial Treatment (WAIT)
Mepex Gin Out fb	8 oz/A	Matchhead Square (MHS)
Mepex Gin Out	10 oz/A	2 Weeks After Initial Treatment (WAIT)
Stance fb	1.5 oz/A	Matchhead Square (MHS)
Stance	2 oz/A	2 Weeks After Initial Treatment (WAIT)
Stance fb	2 oz/A	Matchhead Square (MHS)
Stance	3 oz/A	2 Weeks After Initial Treatment (WAIT)
Pentia fb	8 oz/A	Matchhead Square (MHS)
Pentia	10 oz/A	2 Weeks After Initial Treatment (WAIT)
Stance fb	2 oz/A	Matchhead Square (MHS)
Stance fb	3 oz/A	2 Weeks After Initial Treatment (WAIT)
Stance	3 oz/A	NAWF = 5
Induce fb	0.25 % v/v	Matchhead Square (MHS)
Induce	0.25 % v/v	2 Weeks After Initial Treatment (WAIT)
Untreated		

Table 2. Effect of plant growth regulator application on final plant height, total number of mainstem nodes, and nodes above cracked boll.

PGR	Final Height (in)	Total Nodes	NACB
Mepex fb Mepex	35.4 B	18.2 BC	2.3
Mepex Gin Out fb Mepex Gin Out	35.0 B	18.2 BC	2.3
Stance 1.5 oz fb Stance 2 oz	35.3 B	17.7 C	2.4
Stance 2 oz fb Stance 3 oz	36.3 B	18.0 BC	2.7
Pentia fb Pentia	35.1 B	18.2 BC	2.4
Stance 2 oz fb Stance 3 oz fb Stance 3 oz	36.8 B	18.1 BC	2.9
Induce fb Induce	42.7 A	19.1 A	3.0
Untreated	41.0 A	18.6 AB	2.8
LSD (0.05)	1.8	0.6	NSD

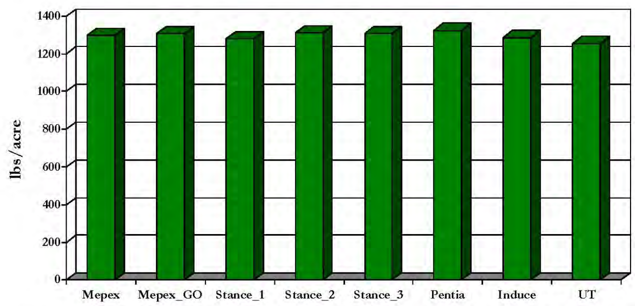


Figure 1. Effect of plant growth regulator application on cotton lint yield.

Table 3. Effect of plant growth regulator application on cotton fiber quality.

PGR	Mic	Staple	Strength	Uniformity
Mepex fb Mepex	4.3	1.13	30.3	82.1
Mepex Gin Out fb Mepex Gin Out	4.2	1.12	30.0	81.7
Stance 1.5 oz fb Stance 2 oz	4.2	1.13	29.8	81.7
Stance 2 oz fb Stance 3 oz	4.3	1.14	30.2	82.2
Pentia fb Pentia	4.2	1.13	29.8	81.8
Stance 2 oz fb Stance 3 oz fb Stance 3 oz	4.3	1.14	30.1	82.1
Induce fb Induce	4.3	1.12	30.0	81.8
Untreated	4.3	1.13	30.2	82.1
LSD (0.05)	NSD	NSD	NSD	NSD

Rice
by Dr. Nathan Buehring

Rice diseases can be very costly for you the producer. Fungicides can be costly if you apply them when they are not needed and foliar rice diseases can be costly if they are left untreated. When looking at using a fungicide for sheath blight control, consider the susceptibility of the rice variety you are growing.

Here is how I rank the most popular varieties we grow in Mississippi in susceptibility to sheath blight from very susceptible to least susceptible: CL 161 (VS), CL 171-AR (VS), Cocodrie (S), Sabine (S), Wells (MS), and XL 723 (MS). CL 161 and CL 171-AR are rated very susceptible to sheath blight and it can move up the plant very rapidly on these varieties. I would begin scouting these varieties shortly after mid-season. Some of the previous research would suggest that two fungicide applications may be necessary for adequate control of sheath blight. If sheath blight is a problem shortly after mid-season, I generally recommend going ahead and applying 6 to 9 fl oz/A of Quadris, and make another application (either Quilt or Stratego) at the late boot timing.

Cocodrie is rated susceptible to sheath blight. In most cases this variety is not as susceptible as CL 161. Therefore, a fungicide application can possibly be delayed until the boot stage. Closely monitoring disease progression will help in making the best decision on applying a fungicide at the appropriate time.

Wells and XL 723 are rated moderately susceptible to sheath blight and traditionally it has not been as big of an issue in these cultivars. However, in some on-farm trials we have seen an economic benefit in making a fungicide application to these cultivars. Once again, scouting and monitoring disease presence and pressure will help make sound decisions on whether or not to make a fungicide application.

Fungicide rates for sheath blight control will depend on how long you need to protect the crop. If you are applying a fungicide in the preboot timing, a higher fungicide rate will be needed to protect the crop through heading. As you get closer to heading, a lower rate may be used since the length of residual control needed will be less.

Last year I had several questions on how early can I spray a fungicide that contains propiconazole (Quilt and Stratego) and get protection from kernel smut. To get protection from kernel smut the application needs to be made in the boot stage. If applying in the early to mid boot stage, an equivalent rate of Tilt at 6 to 8 fl oz/A will be necessary. If applying in the mid to late boot stage, an equivalent rate of Tilt at 4 to 6 fl oz/A will be necessary.

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