

Forages

by Dr. David Lang

Growing Clovers with Bermudagrass

Persistence of clovers has been problematic in Mississippi over the past several decades. White clover has the potential to be a long-lived perennial. The best success in the southeastern U.S. has been achieved with smaller common or 'Dutch' types of white clover. Larger improved ladino types of white clover provide quick first year growth; however, they have not generally persisted more than 2-3 years. Studies conducted at Mississippi State University in the early 1990's by USDA scientists indicated that locally adapted ecotypes of small leafed white clover produced more seed and produced more viable stolons that persisted better than large leafed ladino types. Dr. Joe Bouton, an alumni of Mississippi State University, and distinguished professor at the University of Georgia (now director of research at the Noble Foundation in Oklahoma), used this concept to select and breed white clover that persisted well under grazing in bermudagrass and other summer grasses. One of these is now known and marketed as Durana white clover.

Bermudagrass is a highly competitive warm season perennial grass that requires large quantities of nitrogen (N) fertilizer for optimal growth. The high cost of nitrogen fertilizer has reduced the economical rate of nitrogen to less than 50 lbs N per acre per hay cutting or grazing period of 30-40 days. White clover has the potential to supply up to 200 lbs N/acre per growing season once it is established. Release of this N to the grass is not direct nor is it immediate, but occurs slowly over time as parts of its root system containing nodules slough off and decay. There will not be much N released the first year, but a steady slow release of N will occur over time with the potential to provide an adequate supply of N to bermudagrass. Since white clover is a cool season plant, most of its growth will occur from February to May and also from October to December. Bermudagrass growth will be slow early in the spring and peak in June, July and August. White clover is shade tolerant and will grow under a canopy of bermudagrass, but bermudagrass is sun loving and its growth will suffer under a cool season species, particularly annual ryegrass. Since white clover is low growing it does not interfere severely with early growth of bermudagrass.

During the fall of 2003, Durana white clover was drilled at 5 lbs/acre into bermudagrass varieties at Mississippi State University. Ammonium nitrate (34-0-0) at 200 lbs/acre (68 lbs N) was applied only once in the spring of 2004 but none was applied in 2005 and 2006. Yield of bermudagrass in 2004 was 7400 lbs/acre and white clover yield was 4700 lbs/acre. Over 6 tons of forage were produced with only one application of N by adding white clover to bermudagrass. But will white clover persist in this system? During 2005, without any added N fertilizer, bermudagrass yield was 5800

lbs/acre and white clover yield was 4500 lbs/acre for a total of 5 tons/acre. Durana white clover has persisted into the fall of 2006 with nearly 100% stands following a very dry and hot summer (see photograph). Bermudagrass yield, during the drought year of 2006, without any added N fertilizer during a drought year was nearly 5000 lbs/acre and white clover yield was 2600 lbs/acre for a total of 3.5 tons per acre. Only the summer portion of total yield that was bermudagrass in June through September could reasonably be cut for hay. Forage quality of September cut bermudagrass has been over 12% protein. This is similar to bermudagrass hay cut at that time of year that was fertilized with nitrogen. Clearly, white clover has the potential to substitute for much of bermudagrass's nitrogen requirement. Yield will be less than bermudagrass fertilized with 200 lbs N/acre but the cost and risk involved is considerably less. Consider adding white clover to your bermudagrass fields, both those you hay and in pasture.



Durana white clover persisting well in Bermudagrass three years after planting. Photograph taken October 23, 2006.

Cotton

by Dr. Tom Barber

Harvest Report - Currently 90-95% of our cotton crop has been harvested, which is a very positive thing, considering the current rainfall patterns. Unfortunately, with the wet weather, there is some cotton left in the field; but with a little luck, it will be picked by Thanksgiving. In their last report the Mississippi Agricultural Statistics Service estimated the state cotton yield to be 833 lbs of lint per acre. This is up 40 lbs from the previous estimate of 793, and this sounds a little higher than expected. However, real good cotton can bring the state average up just as easily as real bad cotton can bring it down. Unfortunately, this year there was not much in-between, it was either real good, or real bad.

Variety Selection - The year is barely behind us, and already I've had a lot of calls about varieties. Picking the correct variety can be the most important decision you make as a cotton producer. This year, with the drought, variety selection made a big difference. In the county variety trials that were conducted across the state, there was approximately 200 to 300 lbs lint per acre difference from the top yielder to the bottom at each location. This is significant money that can be gained or lost in one decision. It is very important that you utilize all the variety trial information that is available to you through the Mississippi State University Extension Service, Industry Trials, and personal experience. There will also be decisions to make on technology. Choices of technology will include Roundup Ready, BollGard/Roundup Ready, Roundup Ready Flex, BollGard2/Roundup Ready Flex, and Roundup Ready or Roundup Ready Flex with WideStrike. Other alternatives will include the Liberty Link systems coupled with options of BollGard as well. It will be very easy to get confused and caught up in the tech-

nology. First, look at the yields and grades of the cotton from variety trial information and on farm experience. Then worry about the technology. Choose which technology will fit best in your operation, keeping in mind the different management options and yield potential. For the most part RR/BG stacked varieties have been the most popular for several years, and this will most likely be the case next season as well. They have yielded well and continue to be our standards. Roundup Ready Flex and BollGard2 Flex Varieties were planted on close to 10% of Mississippi Cotton Acres in 2006. This will likely increase to approximately 30% or more in 2007. After this season, we will have 2 years of Variety Trial data and one year of County Trial data on the Flex varieties. The verdict is still out at this point, but there are a few Flex varieties that appear to be yielding with our current standards.

Cotton Short Course Reminder - Don't forget about the Cotton Short Course. It will be held December 5th and 6th at the Bost Extension Conference Center in Starkville. This year's program will include up to date variety trial results, information on current cotton policy, cotton sustainability, new cotton systems, cotton/wheat rotations, insect and weed resistance as well as irrigation and marketing concepts. To obtain a registration form for the Cotton Short Course go to the following website http://msucares.com/crops/cotton/short_course.html or ask your local County Director or Area Agent.

Register Now for the 23rd Annual Cotton Short Course

PRE-REGISTRATION FORM



December 5-6, 2006
Mississippi State University
Bost Extension Center

Pre-registration and information are available online at:
http://msucares.com/crops/cotton/short_course.html

Please print or type

Name _____

Institution or Firm _____

Address _____

City _____ State _____ Zip Code _____

Social/Dinner, December 5 at 6:00 p.m.

Will attend the social/dinner on Tuesday (\$10.00 Fee).

Will not attend the social/dinner on Tuesday.

Pre-registration \$80
On-site registration \$100

Pre-registration DEADLINE is November 24.

On-site registration begins at 8:30 a.m. on December 5.

Mail pre-registration form and payment to: Cotton Short Course, Attn: Tammy Scott, Box 9555, Mississippi State, MS 39762. Please make check payable to: **MSU-ES Cotton Short Course.**

Peanuts

by Mr. Mike Howell

This has been a year of extremes for peanut growers in Mississippi. The drought many growers suffered with this summer delayed peanut development and harvest; however, most of the early peanuts harvested had excellent yields. I have visited with many growers that were harvesting 2 ton peanuts and some areas were as high as 3 tons. Once the rains finally began to come, it has seemed as though they will never stop. Growers have had only 4-5 days suitable to harvest since October 1; and I am estimating that 50% of the crop is still in the field north of I-20. It has not been quite as wet in South Mississippi, and growers have been able to harvest over 90% of those acres at this time. Grades have been sporadic across the state this year, ranging from the mid 60's to the upper 70's.

The good news for growers with peanuts still in the field is that they are holding up better than expected. I have heard of very few problems with peanuts rotting or peg weakening due to over maturity. I am still optimistic that if we can get some dry weather, we can still end up with a good crop this year.

I have had several questions about how long peanuts will continue to develop. Data from Georgia indicates that when temperatures reach the low 40's for three consecutive nights, peanuts will not mature any further. Given this, peanuts need to be dug as soon as soil conditions will allow. Another question along these same lines is: Do we need to dig before a frost, or wait until after the threat of a frost has past? Under ideal conditions, it is best to leave peanuts in the ground if they can't be dug at least 2 days before a frost. Moisture in the peanuts can freeze and cause problems with flavor. On the other hand, as late as we are with this crop, and with the rainy conditions, growers may want to take a chance just to get the crop harvested.

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

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Michael Collins