

ROLL IN THE CLOVER
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If you weren't among the approximately 120 people that attended the Legume Management Field Day back in May, I truly am sorry. We were rolling in the clover! If you were there, you saw that I haven't been pulling your leg when I say that legumes really do make \$en\$e in Georgia! If you missed it, I have provided links to several picture albums and handouts that were made at the field day on the www.georgiaforages.com website (direct link: bit.ly/ugaclloverFD2010). This month's article provides several highlights from this informative and enlightening event.

The Dual Benefits of Investing in Legumes

There are two major reasons why legumes should be incorporated more into beef cattle pastures in Georgia. First, legumes provide substantial amounts of nitrogen (N) to the whole forage system. When legumes constitute 25-40% of the pasture mix, one can generally expect 50 - 150 lbs of N per acre to be added each year. Even if N prices stay in the current range (\$0.55 – 0.60 per lb of N), that means legumes provide us with \$30 – 90 worth of N per acre each year. In nearly all situations, that's more than enough to pay for adding the legume to the mix. In fact, I've heard Dr. Curt Lacy, UGA Extension Livestock Economist, say on many occasions that as long as N prices are higher than \$0.25 – 0.30 per lb of N, then legumes pay for themselves on the value of the N alone. We haven't seen N prices like that in nearly 10 years.

Of course, the value doesn't stop there. The second reason for adding legumes in beef cattle pastures in Georgia is the benefit they provide in increasing the quality of the pasture. This is particularly true for spring-calving herds. The use of annual or perennial legumes provides excellent nutrition in that last 45 days prior to the beginning of the breeding season. Extra nutrition at that time improves body condition of the cows and increases conception rates. Plus, there is increasing evidence that having rumen undegradable protein ("bypass protein") from legumes in the diet of brood cows in the weeks leading up to breeding may actually increase the likelihood that they will complete 1 or more estrus cycles before the breeding season begins. Such will greatly increase breeding success.

Select the Right Legume Species

If you weren't at the field day, you missed a great chance to see the many legume species that we can grow in Georgia. In our legume species demonstration plot, we had 14 annuals (crimson, arrowleaf, berseem, and ball clover, etc.) and perennials (red and white clover, alfalfa, etc.) that really demonstrated what is possible, even in a less than ideal soil. A link to several pictures from the demonstration plot is provided on the aforementioned web page on www.georgiaforages.com.

Clover Improvement Through Breeding

The UGA Experiment Station Facility at Eatonton has been the site of a tremendous amount of research and development over the years. One of the most noteworthy efforts has been in the area of



Dr. Garry Lacefield, University of Kentucky Forage Extension Specialist, shares his insight on the fit of berseem clover (front, center), ball clover (right corner), arrowleaf clover (left), and crimson clover (back, center).

increased grazing tolerance in forage legumes. Forage varieties such as ‘Durana,’ ‘Patriot,’ and ‘RegalGraze’ white clover; ‘Bulldog Red’ red clover; and ‘Alfagraze,’ ‘Bulldog 505,’ and ‘Bulldog 805’ alfalfa have all been developed at the Eatonton station. Dr. Joe Bouton, UGA Emeritus Professor and Forage Breeder, was one of the first to use a selection method that tested varieties under extremely harsh grazing pressure. All of the aforementioned varieties were selected under this type grazing pressure.

Attendees of the field day were able to see the development blocks where UGA plant breeders are currently selecting new forages under heavy grazing. The plots really illustrated the progress that is being made in developing new and more persistent varieties. Again, a link to several pictures of these development blocks are provided on the aforementioned web page on www.georgiaforages.com.

Using Legumes in Stocker Systems

A tremendous amount of grazing research has been done over the years on how to best utilize legumes in beef cattle systems. At the field day, we had a discussion of how those research findings can be put into practice on beef cattle farms in Georgia. Drs. Don Ball and John Andrae, Forage Extension Specialists from Auburn and Clemson Universities, respectively, joined me in discussing the implications of the research from all three of our respective states. We had this discussion in the alleyway of our grazing research paddocks at the Eatonton station. As a background, we had 800 – 900 lb. stockers that had been grazing rye + crimson clover + arrowleaf clover since February 3. Those steers had, at that time, been grazing 100 days, stocked at an average of nearly 2 head per acre, and sustaining average daily gains of nearly 3 lbs per head per day! Those steers continued in that study and were able to sustain that stocking rate and those tremendous gains until we shipped the steers during the second week of June. That means that treatment provided low cost gain for a stocker system for nearly 130 days! Such could make a stocker program very profitable in our state.

Dr. Ball brought along copies of an Extension publication that he co-authored with Dr. Will Prevatt (AU Extension Livestock Economist) entitled “Stocker Cattle Performance and Calculated Pasture Costs,” which summarizes the findings of the grazing research in their state. It is important to note that, of the ten pasture systems that provide the lowest cost per lb of gain, eight of them included legumes! Again, a link to Dr. Ball’s research summary is provided on the aforementioned web page on www.georgiaforages.com.

The evidence is convincing: legumes are the key to producing least-cost beef. In the Southeast, we have many legume species and improved varieties that provide us with a unique opportunity in the beef cattle industry. For more information on how you can incorporate more legumes into your forage system, check out the information provided on our website at www.georgiaforages.com or contact your local University of Georgia Cooperative Extension office (call 1-800-ASK-UGA1).



Dr. Joe Bouton, UGA Emeritus Professor and Forage Breeder, discusses the progress that is being made in developing new white clover varieties that are even more persistent under grazing than his previous releases.



Dr. Don Ball, Auburn University Forage Extension Specialist, presents a summary of grazing research that shows that pastures that contain legumes provide the lowest cost of gain.