Comparing the Yields of Bermudagrass Varieties

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Spring has sprung and there are many who are anxious to see how our state's pastures and hayfields rebound after last year's poor growing season. Fortunately, the species that are a large part of our forage base, bermudagrass and bahiagrass, persist and recover well from dry, hot conditions. Thus, there is good reason to be optimistic for the 2007 growing season. Still, there were a lot of cattlemen that were short on pasture and hay this past year and it has caused some to take a second look at some of our improved bermudagrass varieties.

From a hay production standpoint, the yield potential of bermudagrass makes it the preferred species for most operations in Georgia. Yet, not all bermudagrass varieties are alike. Thus, it is instructive to periodically compare bermudagrass varieties to evaluate their relative yield potential. Some yield extremely well, but may not be perfectly suited to a given situation. So, yield results are by no means the only criterion on which varieties should be compared. Future articles will offer more insight on additional criteria. Nonetheless, yield data from varieties that are compared side-by-side under very similar conditions will give the decision-maker good information about each variety's yield potential. Therefore, it is a valuable way to begin to evaluate varieties. In this month's article, some of the yield results from the past several years are summarized (more specific details are provided on the variety trial page of www.georgiaforages.com).

A few years back, my predecessors, Drs. Robert Morgan and John Andrae, established several bermudagrass variety trials across the state. These trials were located in Calhoun, Griffin, and Tifton and included several hybrid and seeded bermudagrass varieties. In order to prevent any bias, these trials were conducted where all entries were randomly assigned to plots and were managed based on standard UGA recommendations for fertilization, weed control, and harvest management. Each entry was evaluated in four separate and independent plots, or replicates. In the interest of brevity (and to encourage you to visit the www.georgiaforages.com website), only the Calhoun results will be discussed here. However, it is worthwhile to look at the variety trial data that most closely represents the location of your farm.

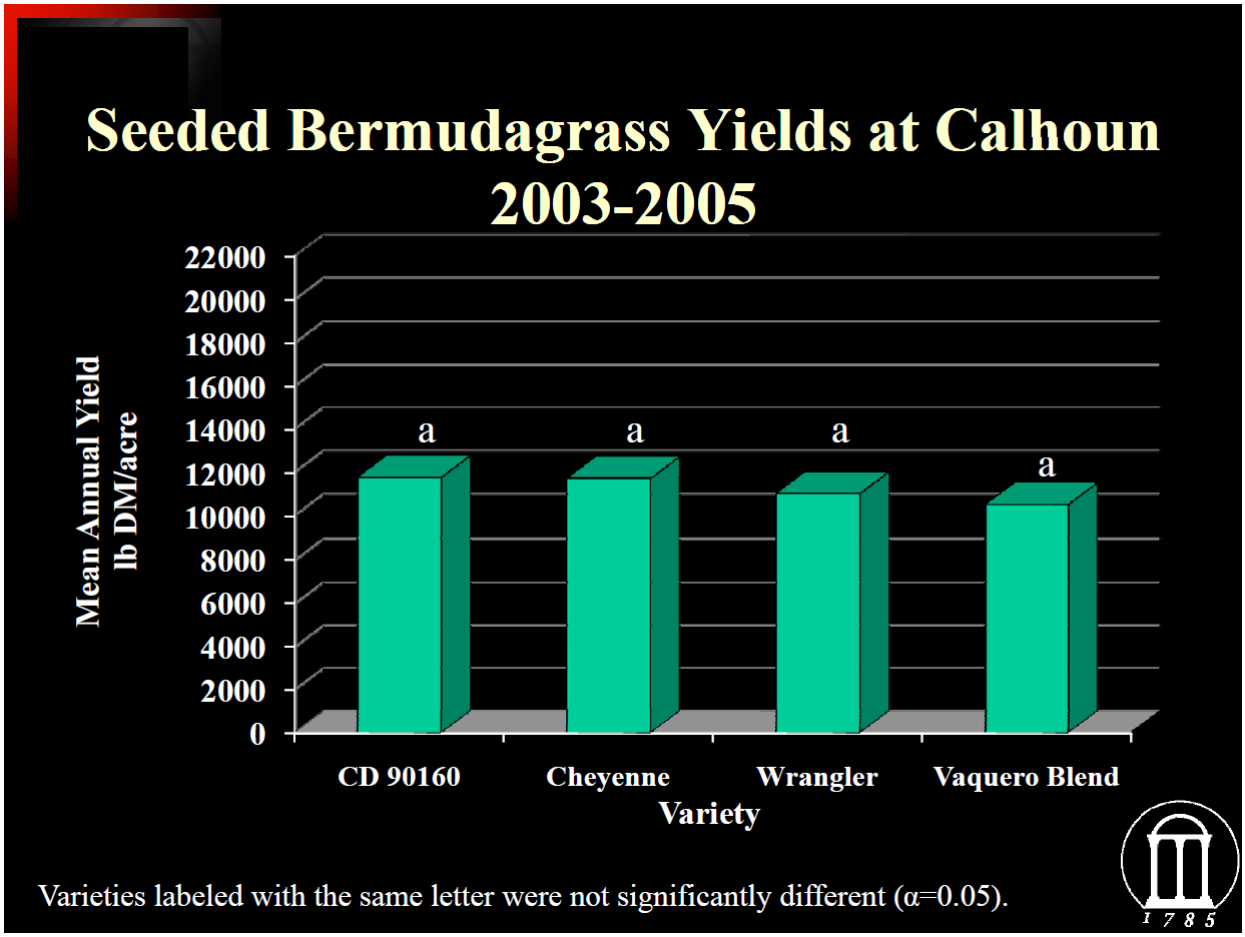
A summary of the data collected from 2003-2005 is presented in the two graphs. The mean (average) annual yield of each variety is presented, but you will note that within each graph the yields of some varieties are labeled with the same letter. If the letter is the same, those average yields should be considered to be the same. If the bars have different letters, then those yields are significantly different. For example, you will notice that the seeded bermudagrasses performed very well at this location, but Vaquero had slightly but significantly lower yields than the other seeded varieties. Interestingly, the other three seeded varieties did not differ significantly in this trial. That was not true in other locations.

From the graph presenting hybrid bermudagrass yields, it is clear that there are considerable differences between the hybrids included in this trial. For example, Coastal yielded less than all the others, except for similar yields to Tifton 44.

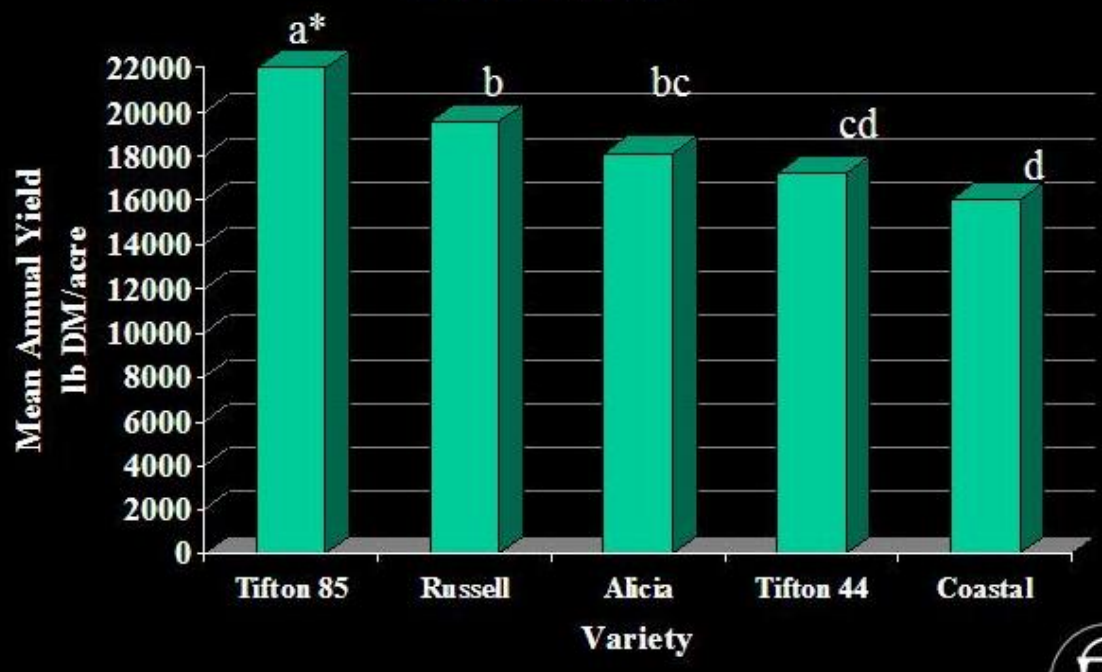
However, this second graph highlights the previous point that variety trial results tell only part of the story. It is plain from the graph that Tifton 85 out-yielded all other varieties in this study. Despite this, we currently DO NOT RECOMMEND the use of Tifton 85 in the northern third of Georgia. This decision has nothing to do with yield, but rather a concern about the winterhardiness of Tifton 85 in this area of our state.

Similarly, by only comparing the yields of hybrid varieties and seeded varieties, one would logically focus on the higher-yielding, hybrid-types. However, yield potential alone doesn't tell the whole story. For example, there are often major differences in the cost of establishing hybrid versus seeded bermudagrasses. Since hybrids must be vegetatively propagated (i.e., sprigged), seeded bermudagrasses have become popular for folks trying to establish bermudagrass hayfields on small acreage.

Of course, not all cultivars are equal. It is good to have "variety." Yield trials are one tool to use in differentiating varieties, but it is not the only consideration. Future articles will discuss the pros and cons of each variety. But, to get a sneak peak into those considerations or to review variety trial information that is more representative of your location, visit our website at www.georgiaforages.com or contact your local University of Georgia Cooperative Extension Service office.



Hybrid Bermudagrass Yields at Calhoun 2003-2005



Varieties labeled with the same letter were not significantly different (α=0.05).