



Forage Research in Texas

1983

Perennial Grass Variety Test-Angleton

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SUMMARY

Tifton 44 and Coastal bermudagrasses were the most productive during 1982 with 5 tons of dry matter per acre. Brazos and Alicia bermudagrasses produced 4 ½ tons followed by Callie bermudagrass with 4 tons. Common dallisgrass was the most sensitive to the very dry summer with yields of only 3 ½ tons. Three year averages indicate there is little yield difference between Tifton 44, Coastal, Brazos, and Alicia bermudagrasses. Callie bermudagrass and dallisgrass 3 year averages were approximately 1500 lb/ac less.

Introduction

The major improved warm season perennial grasses used in the Gulf Coast are dallisgrass, bahiagrass, and the hybrid bermudagrasses. Dallisgrass is very well adapted to the poorly drained heavy clay soils. Bahiagrass and the hybrid bermudagrasses are better adapted to the sandy loam soils. Because of producer interest, forage production of the major bermudagrass varieties were evaluated over the last 3 years and compared to common dallisgrass at the Angleton Research Station.

Procedure

The study was established in the fall of 1979 on a Lake Charles clay at Angleton, Texas. Plots were 6 x 15 ft. in a randomized block design with four replications. Sencor was applied at ½ lb/ac in November 1981 to control volunteer clover. Volunteer dallisgrass in the bermudagrass plots were spot treated with Roundup. Seventy lb of nitrogen and 90 lb of phosphorus per acre were applied March 12. Fifty pounds of nitrogen per acre were applied on May 31 and July 27.

A 32 inch strip was harvested from the center of each plot with a flail mower at a 1 ½ inch cutting height. Plots were harvested on Apr. 13, May 31, July 6, Aug. 23, and Nov. 8. Rainfall for 1982 was only 3.5 inches below the 69 year average, but was very poorly distributed (Table 1). Nine inches of rain in May and in November did not compensate for the unusually dry conditions from June through October.

Results and Discussion

Difference in total forage production of Tifton 44, Coastal, Brazos, and Alicia bermudagrasses was only 1000 lb/ac in 1982 (Table 2). Callie bermudagrass was significantly less than the other bermudagrass because of its poor recovery in the spring as indicated by its low yield at the

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first harvest. Common dallisgrass has less drought tolerance than the hybrid bermudagrasses. Due to the very dry conditions from June to October, dallisgrass production was 3000 lbs less than the four better bermudagrasses varieties.

In comparison to the 3 year average, 1982 yields were higher except for dallisgrass. Tifton 44 bermudagrass had the highest 3 year average yield. Yield difference between Tifton 44, Coastal, Brazos, and Alicia was only 700 lb/ac. However Brazos and Tifton 44 are higher quality forages which will result in higher animal performance than the other bermudagrasses. Callie bermudagrass and dallisgrass 3 year average yields were approximately 1500 lbs than the other four bermudagrasses.

Table 1. Monthly rainfall for 1982 and 69 year average at Angleton.

Month	1982	69 year avg.
January	2.42	3.53
February	5.69	3.17
March	2.38	2.98
April	2.87	3.18
May	9.13	4.33
June	1.80	4.64
July	1.04	4.97
August	2.33	4.57
September	1.50	5.50
October	2.28	3.74
November	9.71	3.87
December	3.98	4.34
TOTAL	45.13	48.82

Table 2. Forage production of warm season perennial grasses at Angleton in 1982 and the 3 year average.

Variety	13 Apr.	31 May	6 July	23 Aug.	8 Nov.	Total	3 yr. avg.
Tifton 44	1775	2564	1450	1994	2412	10194	9460
Coastal	1577	2680	1094	2118	2420	9889	8928
Brazos	1752	2471	830	1481	2701	9235	8785
Alicia	1390	2596	853	1911	2410	9160	9083
Callie	797	2565	824	1517	2433	8135	7655
Dallis	1494	1949	704	1124	1209	6480	7732
LSD .05	226	424	224	260	582	957	