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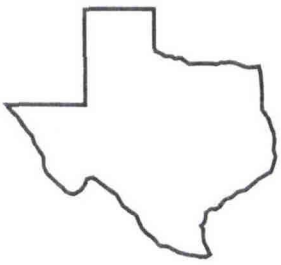
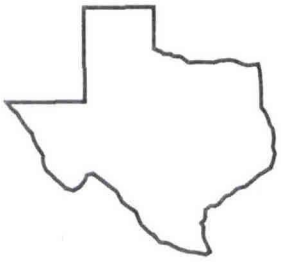
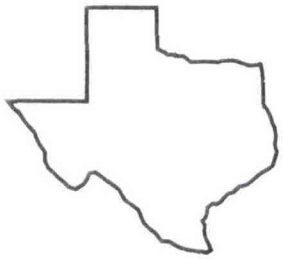
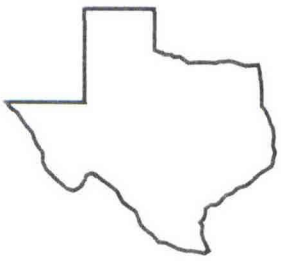




Overton Field Day Report - 1994





1994 Research Center Technical Report No. 94-1

Texas Agricultural Experiment Station • Edward A. Hiler, Director
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PERFORMANCE OF BERMUDAGRASS VARIETIES IN EAST TEXAS

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Background. Bermudagrass is one of the most common and valuable forage plants grown in the southeastern US with 10 million acres in Texas alone. Adaptability to acid, sandy soils, good drought tolerance because of a deep root system, and tolerance to close, frequent grazing are some of the reasons for its wide use. 'Coastal', the first hybrid bermudagrass released in 1943, is grown on more acres than any other variety. Eleven new varieties and breeding lines were planted on 7 May 1991 at the Texas A&M University Agricultural Research and Extension Center at Overton to compare their performance to Coastal bermudagrass. Performance during 1991 and 1992 are reported in Field Day Report - 1993 Overton (p. 27-28. Research Center Technical Report No. 93-1).

The bermudagrass variety test was harvested monthly in 1993 from May through October for a total of 7 harvests. Soil analysis in early April indicated the study site was very low in nitrogen (N) and potash (K) and moderate in phosphorus (P) with a pH of 6.8. Fertilization program was 100 lb/acre of N, P, and K on April 16 with an additional 75 lb/acre of N and K after each of the first five harvests. Total fertilization for the year was 400-100-400 of N,P, and K, respectively. Spring weeds were controlled with 1 qt/acre of Grazon P+D applied April 16, 1993.

Research Findings. 'Tifton 85', 'Jiggs', and 'Coastal' were the most productive varieties in 1993 with about 6 tons/acre. 'Brazos', 'Tifton 44', 'Tifton 78', and Overton bermudagrasses produced about 5 tons/acre. 'Worldfeeder' and 'Grazor' produced only 4 and 3 tons/acre, respectively. No significant rainfall occurred in July, August, and September which reduced yields. Worldfeeder and Grazor are shorter-type bermudagrasses and appeared to be more sensitive to drought on the deep, sandy soils. The study has not been subjected to any low winter temperatures through 1993 so any differences in cold tolerance have not been observed. Reports from Georgia indicate Tifton 85 is less cold hardy than Coastal. Cold tolerance of Jiggs is unknown. The study will continue through 1994 and 1995.

Application. Tifton 85, Jiggs, and Coastal bermudagrasses were the most productive bermudagrass varieties in 1993. Differences in cold tolerance have not been determined at this time because winter temperatures have been average or above since the study was established in May, 1991.

Table 1. Bermudagrass variety test yields at Overton, 1993.

Variety	4 May	4 June	23 June	19 July	23 Aug	22 Sept	22 Oct	Total
	dry matter (lb/acre)							
Tifton 85	1774 abc*	1442 cde	2363 ab	3495 a	1381 a	949 a	1216 b	12,620 a
Jiggs	2096 ab	1798 a	2171 abc	2928 b	1066 bc	744 bc	1381 a	12,184 ab
Coastal	1708 bc	1701 ab	1990 bc	3009 b	1318 a	892 ab	797 cd	11,415 bc
Brazos	2156 a	1482 cde	2160 abc	2447 c	992 c	809 abc	781 d	10,827 cd
Tifton 44	1815 abc	1592 bc	2426 a	2548 c	794 d	774 bc	547 f	10,496 d
Tifton 78	1598 cd	1461 cde	1938 c	2301 c	1167 b	748 bc	950 c	10,163 d
Overton	1241 d	1533 bcd	2061 abc	2491 c	1089 bc	859 abc	745 de	10,019 de
74 x 12-6	1628 cd	1305 e	1962 c	1855 d	1035 bc	717 c	812 cd	9,314 e
Worldfeeder	1888 abc	1353 de	1854 c	1907 d	549 e	368 d	502 f	8,421 f
16-12	1613 cd	1408 cde	1886 c	1534 e	771 d	525 d	608 ef	8,345 f
Grazor	1564 cd	739 f	2112 abc	1033 f	321 f	404 d	516 f	6,689 g

*Waller-Duncan MRT 0.05 level.