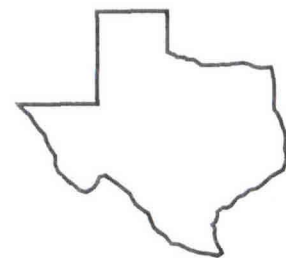
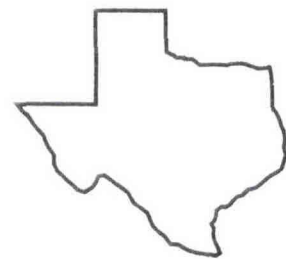
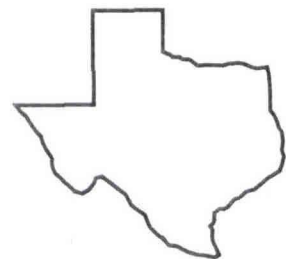


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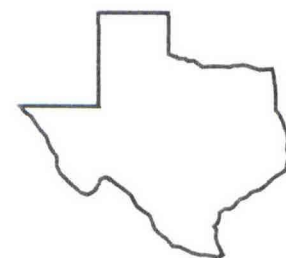
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Overton Field Day Report - 1994



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No. 94-1

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 |
|-------------|-----------|----------|----------|---------|---------|---------|--------|-----------|
| 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 |

-----dry matter (lb/acre)-----

*Waller-Duncan MRT 0.05 level.