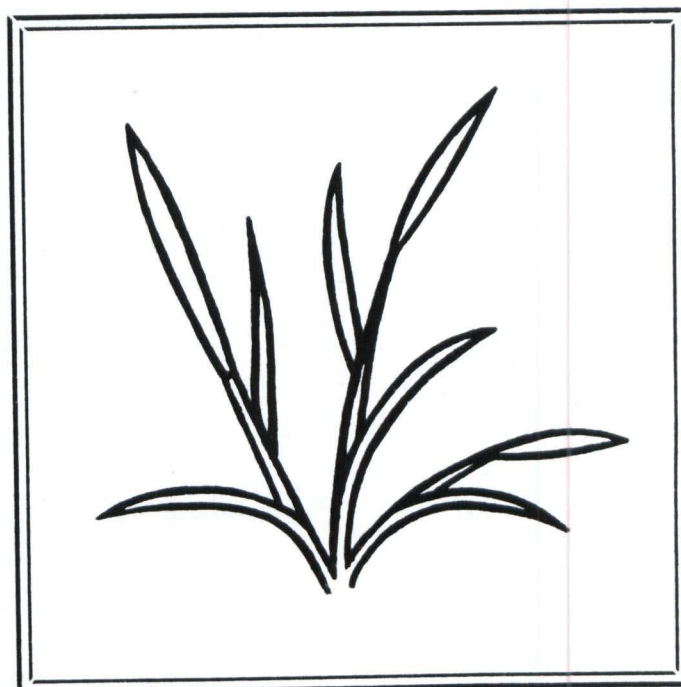
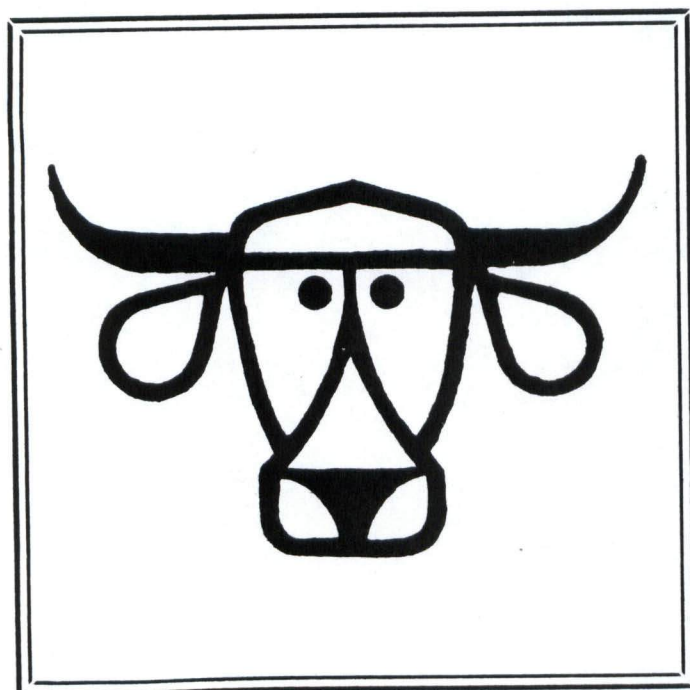
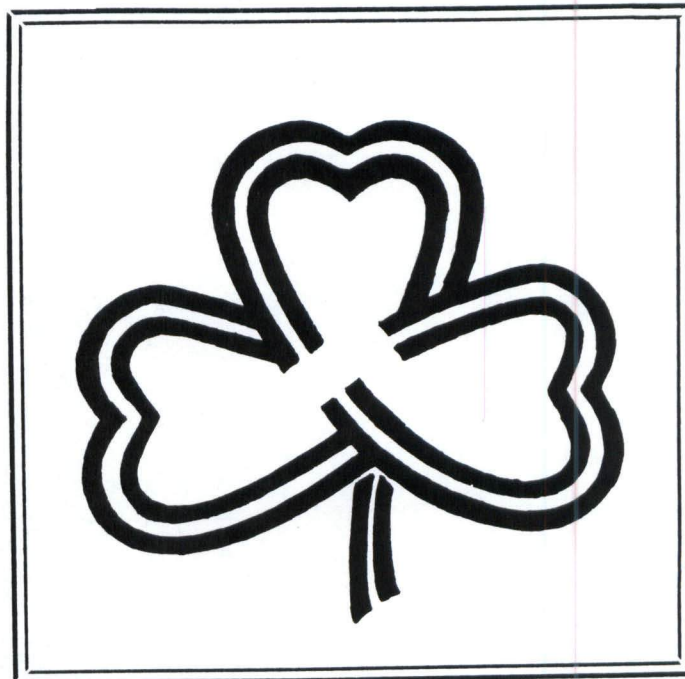




Forage Research in Texas

1983

Performance of Warm-Season Grass Varieties and Species

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ABSTRACT

Several species and varieties of warm-season grass produced yields in the range of 5 to 6 tons of dry forage per acre in 1982. The highest yielding species was Eastern gammagrass followed closely by Alamo switchgrass and Pretoria 90 bluestem. Yields are reported on 26 sources representing grass species commonly available in Texas.

INTRODUCTION

Twenty-six warm-season grasses representing more than 20 commonly available native and introduced species were established in a twice-replicated nursery in 1981 primarily for observation-demonstration purposes. The plots were harvested in 1982 to provide some information on the yield potential of the grasses. Bermudagrasses were not included in the nursery because of their spreading characteristics. Performance of commonly available bermudagrass varieties and new hybrids is included in other reports in this publication.

MATERIALS AND METHODS

Seedlings of the grasses were started in 1-3/4 x 1-3/4 x 2 inch peat pots in the greenhouse in late winter. The seedlings were transplanted on 12-inch centers in 20 foot rows, 2 rows per plot, 2 replications, in early April 1981. The plots were fertilized with 80 pounds nitrogen per acre in May and with 60-60-60 in April 1982. The plots were shredded in July 1981 and during the 1981-82 dormant season. Yield were measured on May 12 and again on August 13, 1982. Because of a very dry summer and early fall, recovery growth after mid-August was inadequate to harvest.

RESULTS

Forage yields in 1982 are reported in Table 1. Even though only two harvests were made and no irrigation water was applied, four varieties produced in excess of five tons of dry forage per acre, and four additional varieties approached five tons per acre. The harvest practice used in this evaluation may have favored the tall, fairly erect species such as Eastern gammagrass and switchgrass.

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KEY WORDS: Warm-season grasses/yield.

However, the yield rankings generally correspond to those in other studies where various of these species have been included. At least one exception is that Llano buffel and likely Nueces usually would be nearer the top. We have not had previous experience with big sacaton and alkali sacaton to know whether their rankings followed expected patterns. Previous observations on big alta limpogloss at this location have been less favorable than indicated in this test except possibly for fall growth which was not measured in 1982. Based on previous experience, plains bristlegrass and possibly sideoats grama may have performed better with more frequent defoliation.

INTRODUCTION

Twenty six warm-season grasses representing more than 20 commonly available native and introduced species were established in a twice-replicated test in 1981 primarily for observation-identification purposes. The plots were harvested in 1982 to provide some information on the field potential of the grasses. Warm-season grasses were not included in the survey because of their spreading characteristics. Performance of commonly available warm-season varieties and new hybrids is included in other reports in this publication.

MATERIALS AND METHODS

Seedlings of the grasses were started in 1-1/2 x 1-1/2 x 2 inch pots in the greenhouse in late winter. The seedlings were transplanted on 12-inch centers in 20 foot rows, 2 rows per plot, 2 replicates, in early April 1981. The plots were fertilized with 80 pounds nitrogen per acre in May and with 40-50-50 in April 1982. The plots were shredded in July 1981 and during the 1981-82 dormant season. Yield was measured on May 12 and again on August 12, 1982. Because of a very dry summer and early fall, recovery growth after mid-August was inadequate to harvest.

RESULTS

Forage yields in 1982 are reported in Table 1. Even though only two harvests were made and no irrigation water was applied, four varieties produced in excess of five tons of dry forage per acre, and four additional varieties approached five tons per acre. The harvest practices used in this evaluation may have favored the tall, fairly erect species such as eastern gamagrass and switchgrass.

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Table 1. Forage yield of grass species in an observation nursery, 1982.

No.	Variety and species	Pounds of dry forage per acre		
		May 12	Aug. 13	Total
9	PMT 831 Eastern gamma	8494 a	6406 ab	14,900 a
5	Alamo switch	5573 b	6612 ab	12,185 ab
23	Pretoria 90 bluestem	3912 bcd	7770 a	11,682 ab
29	Birdwood-buffel	5649 b	4618 bcde	10,067 bc
22	Kleberg bluestem	5439 b	4446 bcdef	9,885 bc
25	Kleingrass 75	4835 bc	4947 abcd	9,782 bc
21	PMT 487 Old world bluestem	3608 bcd	6084 abc	9,692 bc
27	Nueces buffel	4772 bc	4905 abcd	9,677 bc
17	PMT 820 big sacaton	4207 bcd	5066 abcd	9,273 bc
28	Llano buffel	4209 bcd	5055 abcd	9,264 bc
24	Red alta limpograss	3386 cde	5259 abc	8,645 bc
18	PMT 588 caucasian bluestem	3916 bcd	4612 bcde	8,528 bc
2	Renner weeping lovegrass	3934 bcd	3420 defgh	7,354 cd
26	Common buffel	3374 cde	3919 cdefg	7,293 cd
10	Lometa indiangrass	2866 cdef	4803 bcdef	6,949 cde
31	Plains bluestem	2806 cdef	2110 efgh	4,916 de
16	PMT 1733 alkali sacaton	1823 fgh	3137 defgh	4,960 de
11	PMT 1947 big bluestem	2154 efgh	2221 efgh	4,375 def
4	Dallisgrass	2574 defg	1565 fghi	4,139 efg
12	Littlebluestem	1206 fgh	2088 efgh	3,294 efg
20	PMT 1652 little bluestem	597 gh	1728 fghi	2,325 fg
14	PMT 470 sideoats grama	892 gh	1286 ghi	2,178 fg
15	PMT 4022 plains bristlegrass	1058 gh	1038 hi	1,934 fg
30	Palan lovegrass	320 h	1423 ghi	1,743 fg
3	Lehmans lovegrass	261 h	1097 hi	1,358 fg
13	PMT 746 green sprangletop	291 h	214 i	505 g