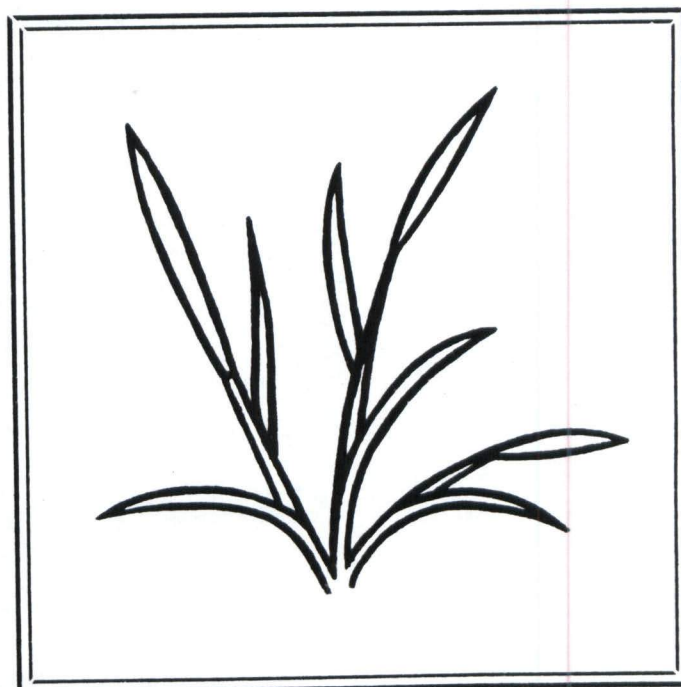
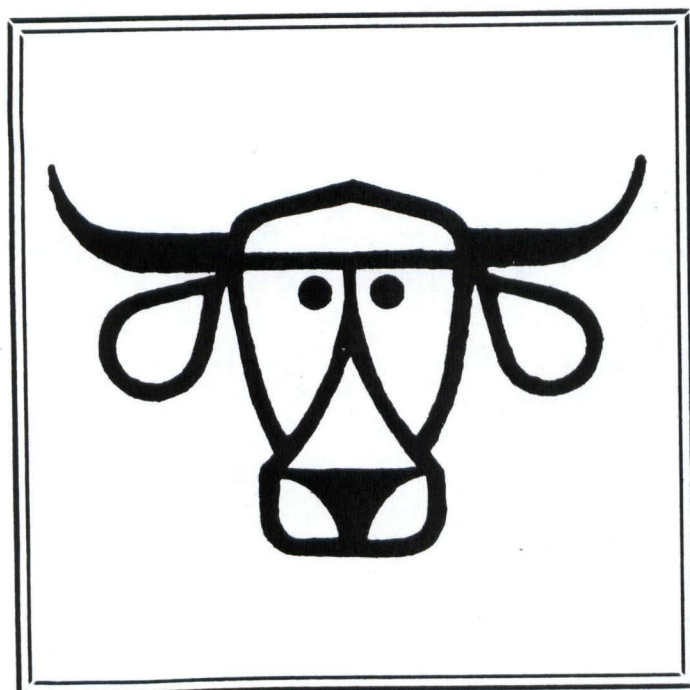
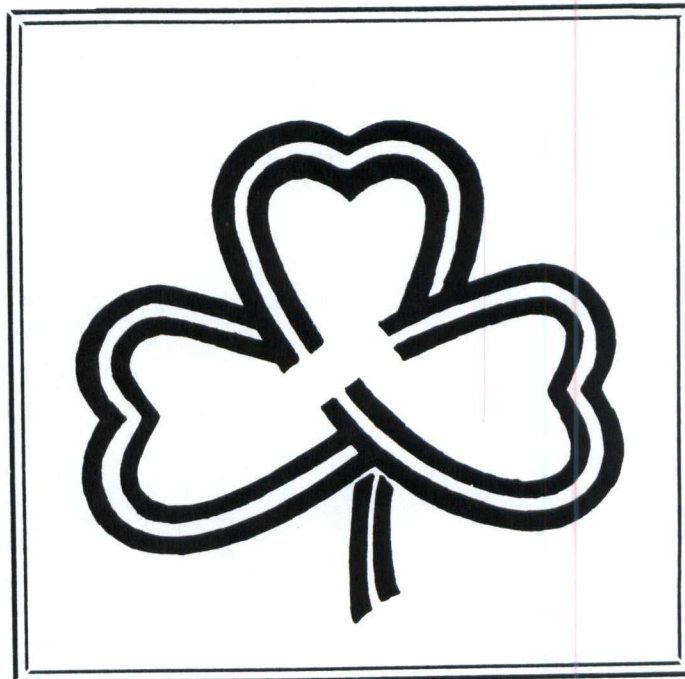




Forage Research in Texas

1983

Performance of Kleingrass Varieties in South Texas, 1981

E. C. Holt and Walter Howell

Summary

Several experimental varieties and types of kleingrass were evaluated for forage yield at Weslaco in 1981. Two blue (*makarikariense*) types produced the most forage followed by two large-seeded selections (Verde and 78-35). A selection for improved forage quality produced less than Kleingrass 75.

Introduction

Kleingrass is widely adapted in Texas, being grown in all land resource areas except the East Texas Timberlands and the Coastal prairies. Prior to 1981 Kleingrass 75 was the only cultivar or seed source available. In 1981 Verde Kleingrass was released and several other advanced experimental materials are being tested. This test was conducted to determine the potential of these materials in South Texas.

Materials and Methods

Seven Kleingrass sources were planted on the Weslaco Center Annex farm (May Farm) on April 2, 1981 in plots consisting of 4 20-inch rows, 20 feet long, 3 replications. The plots were irrigated on April 3 and April 10 to facilitate emergence but were not irrigated again after April 10. First emergence was noted on April 8 and good emergence was evident on April 12. The plots were inadvertently cut on May 5, thus some of the differences in seedling vigor expression through first cutting yield was lost.

Plant materials for the study are described briefly as follows:

Kleingrass 75 (K-75) - a commercially available variety used as the standard or check.

Verde - A large-seed selection released in 1981 with increased seedling vigor.

75-25 - A selection for improved forage quality but with smaller seed than K-75.

78-30 and 78-35 - Advanced breeding materials selected for large seed and seedling vigor.

78-31 - An erect blue (*makarikariense*) robust type.

78-32 - A semi-erect blue (*makarikariense*) robust type.

Rainfall by months was recorded as follows:

<u>Month</u>	<u>Inches</u>	<u>Month</u>	<u>Inches</u>
January	3.10	June	2.37
February	0.67	July	3.88
March	1.81	August	4.01
April	3.33	September	2.46
May	6.29	October	3.85

Results and Discussion

Even though early growth was removed and lost, good yields were obtained in the first year of the planting (Table 1). Kleingrass 75 (K-75) yield exceeded 7700 pounds per acre in two harvests. The erect blue (makarikariense) type had the highest yield followed by the semi-erect blue type.

Verde and 78-35, both selections for large seed, were the highest yielding standard Kleingrasses. They produced 400 to 500 pounds more dry forage than Kleingrass 75. Selection 75-25 was the lowest yielding entry, producing 1300 pounds less than K-75. Selection 75-25 has been found to start slower than K-75 in other studies (1), probably because of smaller seed than K-75, but to produce essentially equal yields after the first year (2). Digestibility of 75-25 is two to four units higher than K-75 (1,2).

Literature Cited

1. Hussey, M. A., and E. C. Holt. 1982. Selection and evaluation of heavy seed weight synthetic cultivars of kleingrass. Texas Agric. Exp. Stn., Soil and Crop Sciences Department DTR 82-1. 8 p.
2. Woodward, W. T. W. 1980. Evaluation of forage species for South Texas. Texas Agric. Exp. Stn. MP 1459. 9 p.

Table 1. Forage yield of Kleingrass varieties at Weslaco.

Variety	Pounds of dry forage per acre		
	August 26	October 29	Total
Kleingrass 75	3,490	4,220	7,710 cd
Verde	3,770	4,440	8,210 bc
75-25	2,960	3,470	6,430 e
78-30	3,630	3,890	7,520 d
78-31	5,330	5,360	10,690 a
78-32	4,340	4,980	9,320 b
78-35	3,610	4,560	8,170 bc

¹ Values followed by the same letter are not significantly different ($P < 0.05$), Duncans Multiple Range.