

Forage Research in Texas

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(AN EVALUATION OF) SEEDING RATES

FOR JOSE AND ALKAR TALL WHEATGRASS IN THE TRANS-PECOS AREA

OBJECTIVE:

To determine the optimum seeding rate for 'Jose' and 'Alkar' tall wheatgrass under sprinkler irrigation with saline water.

PROCEDURE:

Both wheatgrasses were seeded at four rates in a randomized block design with three replications on October 17, 1978. Seeding rates for Jose were 8, 18, 33, and 40 pounds per acre. Seeding rates for Alkar consisted of 8, 21, 33, and 50 pounds per acre. After establishment, plots were harvested from a 5.3 x 20 foot area. Clipping studies began five months after seeding. Plots were harvested at monthly intervals to a 3-inch stubble height. Total weights were determined in the field and sub-samples taken to determine moisture. All plots were fertilized with 40 lbs/acre nitrogen (urea) and sprinkle irrigated after each defoliation with water containing 3000 ppm total dissolved solids. Total amount of water applied, including rainfall, was 61 inches for the 1979 season and 57 inches for 1980.

RESULTS AND DISCUSSION:

Dry-matter yields for the different seeding rates are shown in Tables 1 and 2. Results from both varieties during the establishment years indicated that the optimum seeding rate was 33 pounds per acre; however, during the second year the 8 pound per acre rate was essentially as productive as the 33 pound rate. An economic appraisal will be conducted to further analyze the merits of the various seeding rates. Although the lower rates were as productive during the second year, grazing was limited during establishment and more herbicide was required to control weeds. Also, because of the saline conditions that exist in the Trans-Pecos area, lower seeding rates may not consistently insure a viable stand.

Table 1. Dry-matter yield of Jose tall wheatgrass seeded at four rates.

Year	Seeding Rate (lbs/ac)			
	8	18	33	40
	(lbs. dry-matter/acre)			
1979	9,363	9,566	11,556	11,061
1980	13,080	11,624	13,181	11,594

Table 2. Dry-matter yield of Alkar tall wheatgrass seeded at four rates.

Year	Seeding Rate (lbs/ac)			
	8	21	33	50
	(lbs. dry-matter/acre)			
1979	7,520	9,693	10,299	9,823
1980	13,745	13,279	12,815	12,591