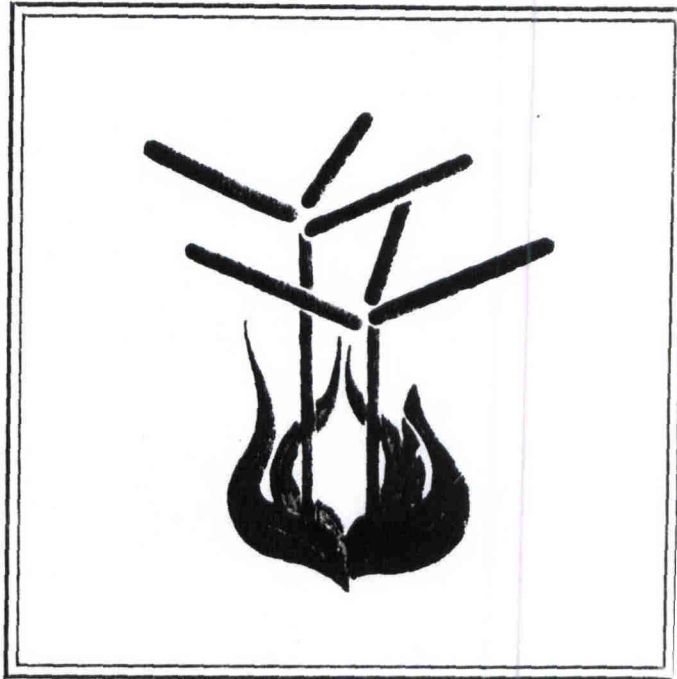
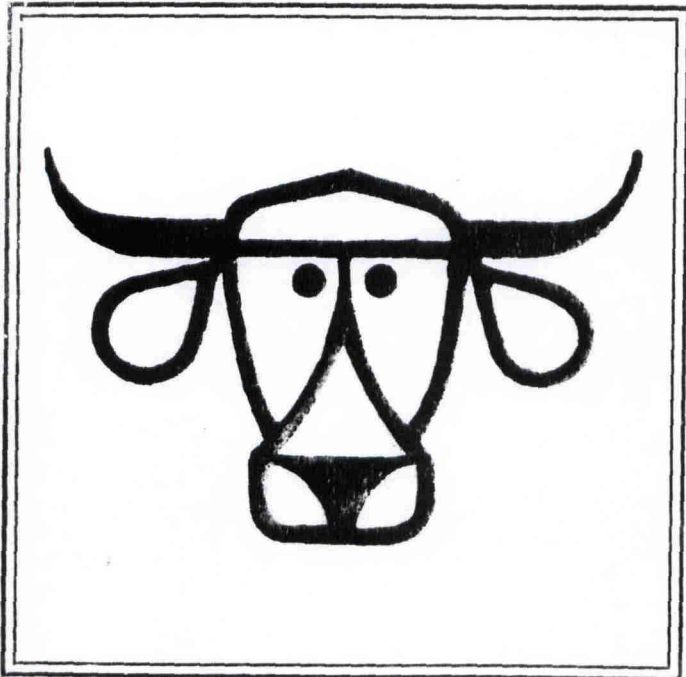
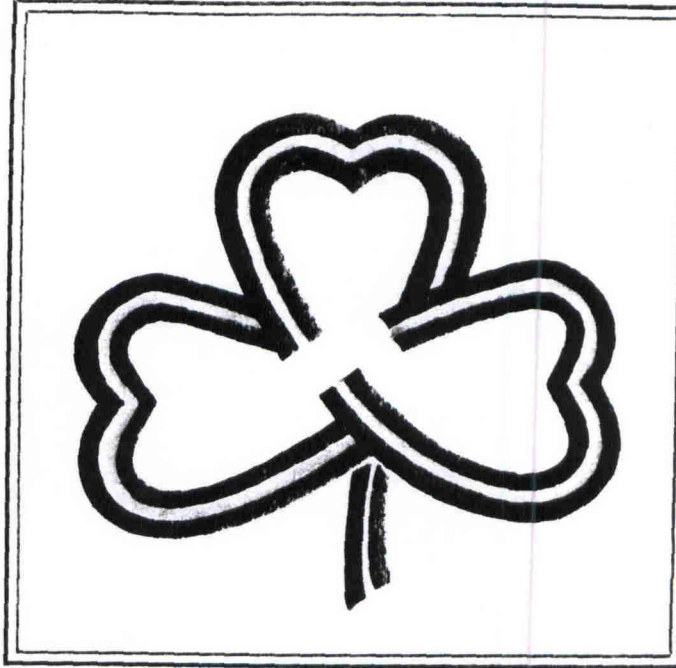


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(INFLUENCE OF) NITROGEN ON DRY-MATTER YIELD OF

FOUR TALL WHEATGRASS VARIETIES IN THE TRANS-PECOS AREA

OBJECTIVES:

To determine optimum dry-matter yield and develop a nitrogen response curve for tall wheatgrass varieties grown on a Hoban silty clay loam soil.

PROCEDURE:

Four varieties of tall wheatgrass ('Jose', 'Largo', 'Alkar', and 'Platte') were drilled in 5.3 x 160 foot strips in October of 1978. Each strip was divided into 16 ten-foot plots. Four nitrogen treatments, with four replications, were randomized and applied in the same order to each strip in March, 1979. Rates consisted of 0, 20, 40, and 80 pounds N (urea)/acre/month. Plots were clipped to a 3-inch stubble height at monthly intervals. Nitrogen was applied and plots were sprinkle irrigated after each defoliation. Total yields were recorded and sub-sampled for moisture content. A total of six nitrogen applications were made during the study period from October, 1978, to October, 1979.

RESULTS AND DISCUSSION:

Dry-matter yield from the four nitrogen levels are shown in table 1. All varieties, with the exception of Largo at the 20 lb./acre/month rate, increased in yield in nitrogen rate though the increases were small in a number of instances. Generally, the larger increases in yield were noted as N rate increased from 40 to 80 lb./acre/month. The data have not been subjected to economic analysis and interpretation. Some of the agronomic yield increases may not be economical. Since this was the initial year of the trial, residual soil nitrogen may have limited the magnitude of yield response. Late in 1979, the nitrogen treatments were visibly evident. Yield data collected during the next two years will provide more reliable information on which to base nitrogen response curves for these grasses.

Table 1. Total dry-matter produced from four levels of nitrogen in pounds per acre.

Variety	Nitrogen Rate (Total N/acre)			
	lbs/ac/mo			
	0	20 (120)	40 (240)	80 (480)
Jose	9,762	10,340	10,386	11,356
Large	9,811	9,644	10,188	10,853
Alkar	8,249	9,555	9,697	10,123
Platte	7,404	8,040	8,255	8,921