

INTERSEEDED ALFALFA VARIETY RESPONSE TRIAL I

This trial is designed to evaluate the response to interseeding of seven pasture type alfalfa varieties and one hay type alfalfa variety which is used as a control. The purpose of this trial is to help determine which alfalfa variety or varieties are suitable for interseeding into rangeland for pasture use. This trial will also test if season of grazing use causes a difference in growth and herbage production from the different varieties, after they are established.

These plots were established on 13 acres located on the S $\frac{1}{2}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 23, and SW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 23 T. 140 N., R. 97 W. at the Dickinson Experiment Station. The 48 x 390 foot plots were arranged in a randomized block design with three replications. Each plot was split equally into three grazing treatments of 30 days each for June, July and August. The soils were vebar fine sandy loam, morton silt loam and regent silty clay loam. The range sites were sandy, silty and clayey. The alfalfa varieties that were included were Anik, Drylander, Kane, Prowler, Rangeland, Spredor II, Travois and Vernal. Each variety was seeded on 27 and 28 April 1983 at the rate of 0.50 lbs. PLS/row/acre, using three foot row spacing and three inch twisted chisel plow shovels as the furrow openers.

The data that were collected from these plots were monthly alfalfa plant counts and alfalfa plant heights.

Interseeded Alfalfa Variety Response Trial I

Location:	Dickinson Experiment Station S½, SE¼, SW¼ Sec. 23, T. 140 N., R. 97 W. and SW¼, SW¼, SE¼ Sec. 23, T. 140 N., R. 97 W.
Replications:	Three Split Plot Design
Study Size:	392° x 1480° 13.32 acres
Plot Size:	48° x 390° 0.43 acres
Drainage:	3.16 acres
Soils:	Vebar, Morton and Regent
Range Sites:	Sandy, Silty and Clayey
Seeding Date:	27-28 Apr 1983
Seeding Rate:	0.50 lbs. PLS/row/acre
Row Spacing:	3°
Chisel Plow Shovel:	3" twisted
Alfalfa Varieties:	Anik, Drylander, Kane, Prowler, Rangelander, Spredor II, Travois and Vernal.
Split Treatments:	Three 30 day grazing periods June, July and August To be applied after adequate establishment of alfalfa varieties.

Table 49. Alfalfa Variety Plant Counts per Meter of Row for the Alfalfa Variety Response Trial I at the Dickinson Experiment Station, 1988

Variety	Grazing Treatment												Mean		
	Jun			Jul			Aug								
	3 Jun	11 Jul	11 Aug	3 Jun	11 Jul	11 Aug	3 Jun	11 Jul	11 Aug	3 Jun	11 Jul	11 Aug			
Anik	0.31	0.36	0.90	0.42	0.33	0.21	1.09	0.73	1.21	0.61	0.47	0.77			
Drylander	0.65	0.71	1.79	1.10	0.73	0.52	0.83	1.15	1.58	0.86	0.86	1.30			
Kane	0.31	0.46	0.84	0.56	0.27	0.31	0.60	1.15	1.29	0.49	0.63	0.81			
Prowler	0.52	0.69	1.06	1.19	1.46	0.13	0.25	0.83	0.96	0.65	0.99	0.72			
Rangelander	0.31	0.50	0.77	0.52	0.33	0.08	0.82	1.48	1.44	0.55	0.77	0.76			
Spredor II	0.60	1.11	1.94	1.63	1.02	0.60	0.46	1.54	0.37	0.90	1.22	1.14			
Travois	0.65	0.94	2.38	1.42	0.83	0.83	1.27	1.42	2.04	1.11	1.06	1.75			
Vernal	0.48	0.77	1.40	0.73	0.63	0.84	0.96	2.02	1.94	0.72	1.14	1.39			

Table 51. Mean Alfalfa Plant Heights in Centimeters for the Alfalfa Variety Response Trial I at the Dickinson Experiment Station, 1988

Variety	Grazing Treatment								Mean	
	Jun		Jul		Aug		3 Jun	11 Aug		
	3 Jun	11 Aug	3 Jun	11 Aug	3 Jun	11 Aug			3 Jun	11 Aug
Anik	29.39	13.35	26.38	14.22	27.37	14.88	27.38	14.14		
Drylander	31.96	13.72	35.36	14.67	29.38	15.98	32.24	14.79		
Kane	21.40	11.47	24.33	21.51	24.86	18.41	23.86	17.13		
Prowler	23.88	13.54	31.34	10.52	32.93	18.63	31.10	14.69		
Rangelander	26.49	11.48	37.35	15.53	34.99	17.01	33.65	14.57		
Spredor II	34.15	14.00	30.10	16.32	33.14	18.12	32.28	16.15		
Travois	31.97	13.67	29.90	18.13	39.24	24.59	33.81	18.80		
Vernal	38.91	19.24	38.99	18.89	28.73	19.00	35.22	19.04		