ALFALFA INTERSEEDING TIME OF SEEDING AND FERTILIZATION TECHNIQUES TRIAL

This trial was designed to evaluate alfalfa interseeding into rangeland with different seeding dates and fertilization at seeding. The intended purpose of the data will be primarily to assist in the determination of a recommended seeding time and if nitrogen and phosphorus should be added at seeding for alfalfa interseeding into rangeland for pasture use in western North Dakota.

These plots were established on 0.55 acres at three locations at the ranch headquarters of the Dickinson Experiment Station. The 20 x 200 foot time of seeding plots were randomly located within two replications at each of the three study sites. The fertilization treatments were applied systematically as split plots across each study site. The soils were loam and sandy loam. The range sites were silty and sandy. Anik, Kane, Rangelander and Travois alfalfa was seeded at a rate of 0.50 lbs. PLS/row/acre on 19 November 1984, 15 April and 15 May 1985. The furrows were opened with three inch twisted chisel plow shovels spaced at ten foot rows. The fertilization treatments were 60 lbs. of nitrogen per acre and 50 lbs. and 100 lbs. of phosphorus per acre applied as a band at time of seeding.

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

Alfalfa Interseeding Time of Seeding and Fertilization Techniques to Improve Seedling Establishment Trial

Location:	Dickinson Experiment Station Ranch Headquarters at three study sites Pasture 2 SW¼, NW¼, SE¼, Sec. 21, T. 143N, R. 96W Pasture 4 SW¼, NW¼, NE¼, Sec. 28, T. 143N, R. 96W Pasture 6 SE¼, NW¼, NE¼, Sec. 28, T. 143N, R. 96W
Replications:	Six Split Plot Design
Study Site Size:	120° x 200° 0.55 acres
Plot Size:	20° x 200° 0.09 acres
Split Plot Size:	20° x 50° 0.02 acres
Soil:	Loam and Sandy loam
Range Site:	Silty, Sandy
Seeding Date:	19 Nov 1984 15 Apr 1985 15 May 1985
Seeding Rate:	0.50 lbs. PLS/row/acre
Alfalfa Variety:	Anik, Kane, Rangelander, Travois
Row Spacing:	10°
Furrow Width:	3" twisted chisel plow shovel
Fertilizer Treatments:	Control 60 lbs. N/acre 50 lbs. P_2O_5/acre 100 lbs. P_2O_5/acre

Table 47. Mean Alfalfa Plant Count per Meter of Row for all Three Pastures for the Interseeding Techniques to Improve Seedling Establishment Trial at the Ranch Headquarters Dickinson Experiment Station, 1988

Seeding Date Treatment	9 Jun	5 Jul	3 Aug
19 Nov 84			
Control	0.15	0.17	0.15
60 lbs. N / ac	1.10	0.53	0.40
50 lbs. P / ac	0.38	0.38	0.13
100 lbs. P / ac	0.52	0.17	0.17
15 Apr 85			
Control	0.12	0.08	0.05
60 lbs. N / ac	0.70	0.40	0.32
50 lbs. P / ac	0.05	0.13	0.07
100 lbs. P / ac	0.35	0.07	0.08
15 May 85			
Control	0.03	0.00	0.02
60 lbs. N / ac	0.28	0.12	0.08
50 lbs. P / ac	0.12	0.08	0.03
100 lbs. P / ac	0.12	0.08	0.10

Table 48. Mean Plant Height in Centimeters for all Three Pastures for the Alfalfa Interseeding Techniques to Improve Seedling Establishment Trial at the Ranch Headquarters Dickinson Experiment Station, 1988

Seeding Date **Treatment**	**9** **Jun**
19 Nov 84	
Control	10.43
60 lbs. N / ac	14.22
50 lbs. P / ac	15.06
100 lbs. P / ac	17.92
15 Apr 85	
Control	15.14
60 lbs. N / ac	18.74
50 lbs. P / ac	12.09
100 lbs. P / ac	21.25
15 May 85	
Control	18.70
60 lbs. N / ac	16.61
50 lbs. P / ac	12.80
100 lbs. P / ac	21.27