

NAME OF TEST: Effect of fertilizers and cropping systems on oat forage yields at McGregor, Texas, 1961.

EXPERIMENTAL PROCEDURE:

Location: Substation No. 23, McGregor, Texas

Soil type: Houston clay

RESULTS: See table.

DISCUSSION: The forage production on February 15 shows the fall and winter forage available. The lower yields of rotated oats are believed to have been caused by a poor seed bed and nitrogen deficiency due to a late crop of cotton with an excessive growth of cotton stalks.

PROJECT: State 1240

DATE SUBMITTED: April, 1962

WORKER: M. J. Norris

Oat forage yields at McGregor, Texas, 1961

Fertilizer N-P-K	Acre yield, air-dry forage, pounds					
	Cropping system					
	Continuous oats		Rotated oats		Average	
	Feb. 15	Total	Feb. 15	Total	Feb. 15	Total
0-0-0	1158	2723	455	1290	807	2007
15-0-0	1392	3043	1045	2343	1218	2693
30-0-0	1647	3910	1290	3722	1468	3816
0-15-0	858	2340	643	1723	751	3032
15-15-0	2132	3883	1390	2745	1761	3314
30-15-0	2770	4523	2357	4287	2563	4405
0-30-0	1493	2955	627	1578	1060	2267
15-30-0	1788	3530	1678	3237	1733	3383
30-30-0	3002	5153	2733	4673	2868	4913
30-30-30	3093	4865	2722	4360	2908	4612
45-30-0	2782	4723	3098	5420	2940	5072
60-30-0	2950	4982	3398	6033	3174	5508
30-45-0	3095	5043	2717	4908	2906	4976
30-60-0	3067	4953	3742	5587	3404	5270

NAME OF TEST: The influence of nitrogen fertilizer and time of application on total yield of Gulf ryegrass, Angleton, Texas, 1961.

OBJECTIVES: (1) To determine the effect of several rates of nitrogen on total yields and (2) to determine the effect of split application on total yield.

EXPERIMENTAL PROCEDURE:

Location: Substation No. 3, Angleton, Texas

Soil type: Lake Charles clay

Cultural practices: Randomized block with four replications. Plot size is 6 feet wide x 20 feet long. Seeding date was September 27, 1961. The rates of fertilizer and time of application is indicated in Table 1.

RESULTS: See tables.

DISCUSSION: Since feeding trials have shown that the quality of harvested ryegrass forage deteriorates fairly rapidly after April 1, summary yield data for forage produced by March 22 as well as the total yield are presented in Table 1.

When all of the nitrogen was applied at planting, 90 pounds or more nitrogen per acre were required to produce a significant increase in forage yields.

Applying the fertilizer in split applications significantly increased the yield over an equal amount of nitrogen all applied at planting time.

PROJECT: Hatch 388

DATE SUBMITTED: March, 1962

WORKER: Marvin E. Riewe

Table 1. The effects of nitrogen rate and time of application on oven-dry forage yields of Gulf ryegrass in pounds per acre by cutting dates, Angleton, 1961.

9/27/61	Fertilizer applied			Clipping dates				Total to	Total
	12/3/60	2/2/61	3/24/61	12/21/60	1/31/61	3/22/61	5/8/61	3/22/61	
0-40-0				1370	780	690	1210	2840	4050
30-40-0				1670	770	650	1190	3090	4280
60-40-0				1770	850	890	1150	3510	4660
30-40-0		30-0-0		1640	950	2340	1090	4930	6020
90-40-0				1680	1260	1180	1240	4120	5360
30-40-0	30-0-0	30-0-0		1770	1420	2370	1050	5560	6610
60-40-0		30-0-0		1730	1040	2150	1060	4920	5980
120-40-0				1820	1420	1240	1110	4480	5590
90-40-0		30-0-0		1670	1250	2370	1090	5290	6380
60-40-0		30-0-0	30-0-0	1550	1150	2180	1810	4880	6690
60-40-0		60-0-0		1780	810	3210	1150	5800	6950
60-40-0		60-0-0	60-0-0	1720	1090	3080	1590	5890	7480
LSD	.05							808	862
	.01							1085	1156

NAME OF TEST: The influence of fertilization and 2,4-D on K.R. bluestem, Temple, 1960.

OBJECTIVE: To evaluate K.R. bluestem for forage yield, and protein and phosphoric acid content with various fertilizer treatments and weed control.

RESULTS: See table.

DISCUSSION: The control of weeds greatly increased total yield but did not influence protein or P₂O₅ content of the forage. With weed control 60 pounds of N increased yield about 500 pounds. Without weed control yields were about the same with all fertilizer treatments.

Table 1. Forage yield and protein and phosphoric acid content of K. R. bluestem grass treated with 2,4-D, Temple, Texas, 1960

Fertilizer treatment N P K	Treated *				No treatment			
	Lbs/acre forage	Protein percent	Protein acre	P ₂ O ₅ percent	Lbs/acre forage	Protein percent	Protein acre	P ₂ O ₅ percent
0-0-0	5190	6.05	314	0.27	3695	6.20	229	0.29
0-30-0	5115	5.59	286	0.33	3350	7.45	250	0.32
30-0-0	5255	5.23	275	0.28	3700	6.88	248	0.29
30-30-0	4620	6.15	285	0.31	3705	6.34	235	0.34
60-0-0	5700	6.22	354	0.29	3740	6.24	233	0.26
60-30-0	5670	5.81	329	0.29	3610	7.24	261	0.37
Average	5258	5.84	307	0.29	3633	6.72	243	0.31

* Sprayed with 2,4-D.