

YEAR/PROJECT: 1996/755

TITLE: Safflower Forage - Nitrogen Rate Trial

PERSONNEL: Leon Welty, NWARC
Louise Prestbye, NWARC

This study was designed to determine the amount of nitrogen fertilizer needed to produce optimum safflower forage yield and quality. Treatments were four rates of N (30, 60, 90, and 120 lbs/a) and a 0-N control arranged in a randomized complete block design with four replicates. The study was seeded with 'Centennial' safflower at 25 lbs/a PLS on May 21, 1996, and the N rates applied the same day. Each plot was seeded in 7 rows, 15 feet long with 6-inch row spacing. No differences in plant vigor or height were observed. All plots were harvested Aug. 15, 1996. Flowers were beginning to wilt in all plots, with the high N rates (90-120 lbs/a) slightly more mature than the 30-lb and 0-N plots. There were no differences among N rates in dry matter yield, and none produced more forage than the unfertilized control. Samples are being analyzed for protein, ADF, and NDF.

**SAFFLOWER FORAGE - NITROGEN RATE TRIAL
KALISPELL, 1996**

<u>RATE</u> <i>lbs N/a</i>	<u>VIGOR</u> ¹ <i>(0-5)</i>	<u>HEIGHT</u> <i>inches</i>	<u>STAGE</u> <i>% wilt</i>	<u>YIELD</u> <i>tons DM/a</i>
0	4.5	32.25	10	3.68
30	5.0	31.75	8	3.76
60	4.5	31.50	19	3.66
90	5.0	31.25	26	3.63
120	4.5	31.75	26	3.53
mean	4.7	31.70	18	3.65
LSD(0.05)	NS	NS	16 ²	NS
CV(s/mean)	10.3	2.9	59.7	8.1

¹ Estimates of plant vigor on 7/8/96

² P=0.08

Planting date: 5/21/96

Harvest date: 8/15/96