

Nebraska Soybean & Feed Grains Profitability Project

<i>Years:</i>	2006
<i>Title:</i>	Nitrogen Fertilizer Rates & Application Timing
<i>Crop:</i>	Corn
<i>NSFGPP Operator:</i>	ARDC
<i>Private Industry Cooperator:</i>	Mark Schroeder
<i>Objective:</i>	Determine & document the effect of nitrogen fertilizer rates & application timing on the profitability of limited irrigated & irrigated corn.

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Treatments - Irrigated:

30,000 plant population

Full irrigation - 14 inches

1. Split 90 Pre(NH₃) + 37 SD(UAN) = 127 lbs/ac
2. Preplant ENR @ 140 lbs/ac (NH₃)
3. Preplant UNL Rec @ 154 lbs/ac (NH₃)
4. Preplant FARM Rate @ 180 lbs/ac (NH₃)

Treatments - Limited Irrigation:

30,000 plant population.

Limited irrigation - 5.25 inches

1. Side-dress(UAN) @ 64 lbs/ac
2. Preplant ENR @ 78 lbs/ac (NH₃)
3. Preplant UNL Rec @ 86 lbs/ac (NH₃)
4. Preplant FARM Rate @ 120 lbs/ac (NH₃)

SD = Side-dressed

ENR=UNL economical nitrogen rate based on \$2.20/bu corn with 235 bu/ac irrigated yield goal & 145 bu/ac limited irrigation yield goal.

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Results:	2006	Pioneer 33R79			
<u>Dryland</u>		<u>Nitrogen Treatment</u>			
	<u>64</u>	<u>78</u>	<u>86</u>	<u>120</u>	<u>Prob>F</u>
Yield, bu/ac @15.5%	170	164	164	165	0.533 ns
Moisture, %	17.2	17.5	17.5	17.5	0.291 ns
Monitor, bu/ac	164	160	160	162	0.743 ns
Cost/ac (w/appl cust)	\$29.60	\$30.80	\$33.20	\$43.40	-----

Planting Date:

Harvest Date:

Summary: Rate of applied nitrogen had no significant effect on grain yield (weigh wagon or monitor) or grain moisture in either study. NH3 Cost \$490/TNH3 application cost included (\$7.40/ac) UAN cost \$245/T. UAN application cost included (\$5/ac).

Soil Test Results: N/A