

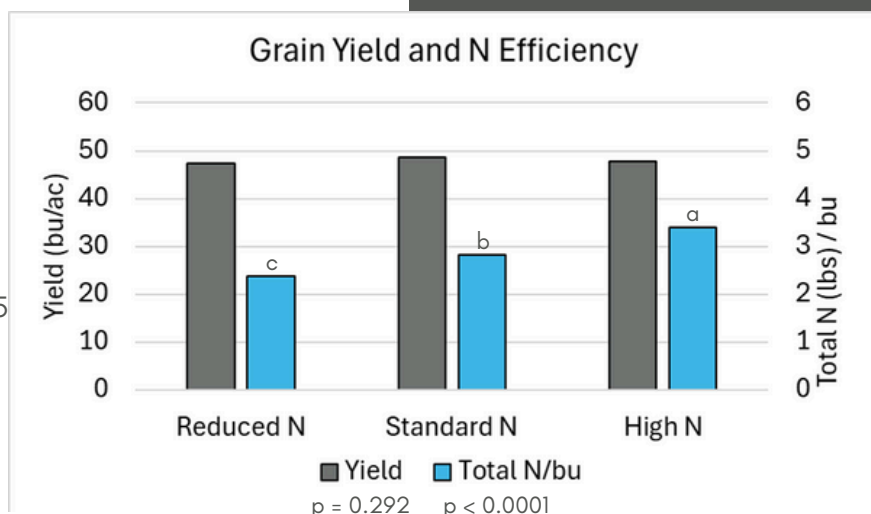
# Nitrogen Rate Trial NR\_20

## Site Info

**Trial ID:** NR\_20  
**Rural Municipality:** Minitonas  
**Residual N (0-24"):** 37 lbs./ac  
**Seeding Date:** May 27, 2025  
**Seeding Equipment:** Bourgault  
**Variety:** L330  
**Harvest Date:** September 13, 2025

## Nitrogen Application

**Source:** Anhydrous Ammonia  
**Placement:** Banded  
**Timing:** Fall of 2024



Within each data type, treatments with different lowercase letters are significantly different at 95% confidence level ( $p < 0.05$ ). Data types with no lowercase letters listed indicate an insignificant treatment effect.

## Results Summary

**Plant Establishment:** N Rate had no effect on plant establishment in this trial

**Tissue N:** N Rate had no effect on N Tissue content at bolting in this trial

**Grain Yield:** Yield was not significantly influenced by N rate treatments in this trial. However, the reduced N rate improved N use efficiency, utilizing 2.37 lbs N to produce one bushel of grain yield compared to 2.82 lbs N/bu and 3.39 lbs N/bu utilized by standard and high rates, respectively.

**Profitability:** The reduced N rate treatment lowered costs while maintaining a similar yield to the farm standard N rate, returning \$17/ac more profit than the standard. The high N rate treatment did not significantly increase yield, cutting profit by \$17/ac compared to the standard.

Treatment	Fertilizer N Applied	Total N (Soil + Fert)	Plant Counts at 4-leaf	Tissue N at Bolting	Grain Moisture
	Lbs. N/ac	Lbs. N/ac	plants/ft <sup>2</sup>	%	%
Reduced N	75	112	5.72	5.79	9.88
Standard N	100	137	6.19	6.12	9.95
High N	125	162	6.18	5.97	10.03
	<i>p-value</i>		0.680	0.680	0.140

# Nitrogen Rate Trial NR\_20 Continued



## NR\_20 Weather

	Apr	May	June	July	Aug	Sept	Total
Rainfall (mm)	1.8	23.8	48.5	20.8	135	32.5	262.4
Avg Daily Temp (°C)	2.64	12.52	15.9	17.59	19.13	15	

## NR\_20 Economic Analysis

N Rate	Mean yield (bu/ac)	N Fert Cost <sup>1</sup>	Change in Profit from Farm Standard <sup>2</sup>
75 lb/ac	47.43	\$51/ac	\$17/ac
100 lb/ac	48.72	\$68/ac	-
125 lb/ac	47.85	\$85/ac	-\$17/ac
P-value	0.293		
CV	4.43		

<sup>1</sup> Based on 2025 MB Cost of Production: estimated cost of urea ~ \$690/mt N, \$0.68/lb N

<sup>2</sup> Change in profit is calculated as the difference in grain sales income (based on estimated canola sale price of \$13.25/bu) and treatment costs, relative to the standard farm practice. Yields were not significantly different in this trial, therefore there are no differences in grain sales income.

Agronomic Support for this Trial  
Provided by:

