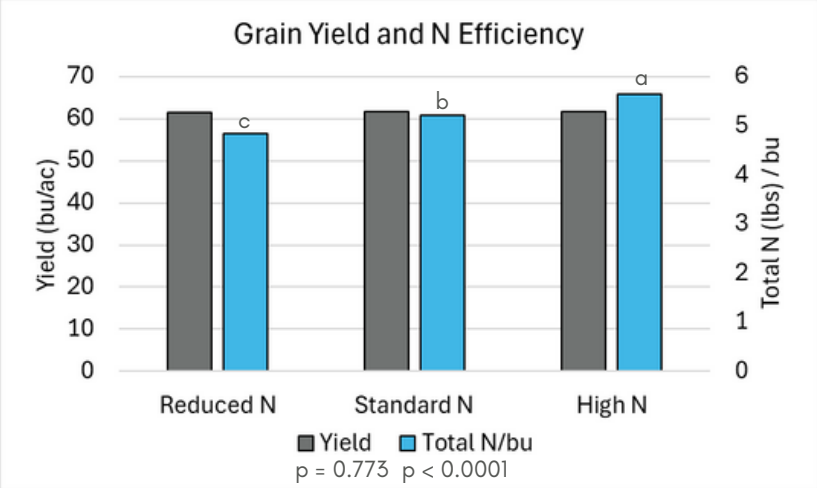
Nitrogen Rate Trial

NR_17

Site Info

Trial ID: NR_17
Rural Municipality: Oakland-Wawanesa
Residual N (0-24"): 197 lbs./ac
Seeding Date: May 27, 2025
Seeding Equipment: Bourgault 5710 Hoe Drill
Variety: L340 PC
Harvest Date: Sept 24, 2025



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.

Nitrogen Application

Source: Urea
Placement: 80lbs banded in fall and balance in spring
Timing: Fall + Spring

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 4.85 lbs N to produce one bushel of grain yield compared to 5.22 lbs N/bu and 5.64 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/ft²*	*%*	*%*
Reduced N	100	297	6.3	4.83	5.53
Standard N	125	322	6.35	4.47	5.48
High N	150	347	5.89	5.11	5.50
p-value			*0.660*	*0.440*	*0.870*

NR_17 Continued

NR_17 Weather

	Apr	May	June	July	Aug	Sept	Total
Rainfall (mm)	20.8	74.3	16.5	53.3	31.1	43.3	239.3
Avg Daily Temp (°C)	4.52	12.94	16.6	18.3	18.52	15.31	

NR_17 Economic Analysis

N Rate	Mean yield (bu/ac)	N Fert Cost [1]	Change in Profit from Farm Standard [2]
100 lb/ac	61.35	$68/ac	$17/ac
125 lb/ac	61.70	$85/ac	-
150 lb/ac	61.58	$102/ac	-$17/ac
P-value	0.773		
CV	1.95		

[1] Based on 2025 MB Cost of Production: estimated cost of urea ~ $690/mt N, $0.68/lb N

[2] 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:

T·A·C
TONE AG CONSULTING LTD.