

Canola Nitrogen Rate – NR_08

Research Question: Are N rates being used on canola across Manitoba sufficient for optimizing yield and nitrogen efficiency?

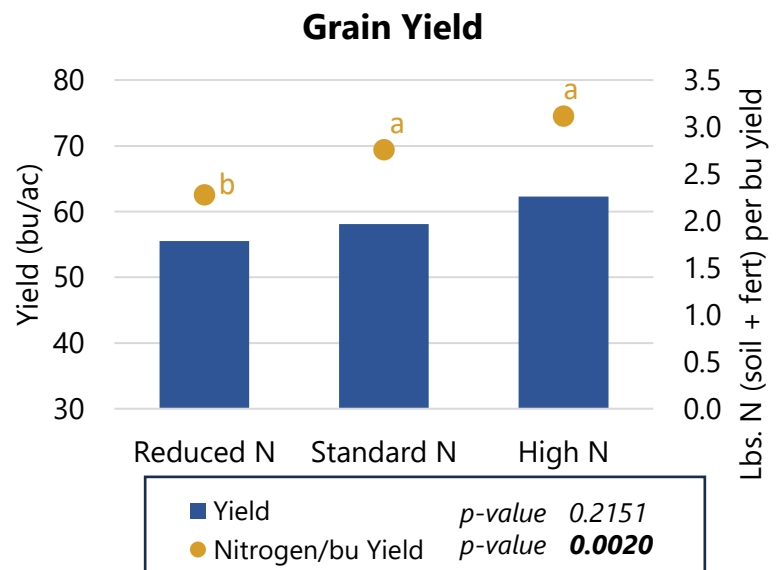
Site Information	
R.M.	North Norfolk
Residual N (0-24')	25 lbs. N/ac
Seeding Date:	May 16, 2023
Seeding Equipment:	1790 JD planter
Variety:	L345PC
Harvest Date:	

Nitrogen Application	
Source:	28-0-0
Placement:	Surface Applied
Timing:	Pre-seed

Summary

- **Plant Establishment:** N rate had no influence on plant counts in this trial.
- **Tissue N:** The high rate of N significantly increased N content of the plant at bolting compared to the standard and reduced N rate.
- **Grain Moisture:** Nitrogen rate had no influence on grain moisture in this trial.
- **Grain Yield:** There was no significant differences in yield in this trial. There was an insignificant trend of increased yield as N rate increased.
- **Nitrogen Efficiency:** The reduced N treatment was most efficient with N supply, using 2.3 lbs. N per bushel of grain yield produced.
- The high N treatment produced statistically the same yield as the farm standard N practice but reduced N efficiency from 2.8 to 3.1 lbs. N per bushel of grain yield produced.

Treatment	Fertilizer N	Total N (Soil + Fert)
<i>lbs. N / ac</i>		
1 Reduced N Rate	101	126
2 Standard N Rate	135	160
3 High N Rate	168	193



	Plant Counts at 4 Leaf (ft ²)	N Tissue at Bolting (%)	Harvest Grain Moisture (%)
1. Reduced N	7.5	5.1ab	8.8
2. Standard N	6.9	4.8b	8.7
3. High N	6.7	5.2a	8.9
p-value	0.1136	0.0177	0.6058

The absence of lowercase letters for any data type indicates no significant differences between treatments.

	Apr	May	June	July	Aug	Total
Rainfall (mm)	20	19	35	30	30	134
Avg Daily Temp (C)	0.9	16	21	19	19	

