

Canola Nitrogen Rate – NR_06

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

Site Information

R.M.	Minitonas-Bowsman
Residual N (0-24')	18 lbs. N/ac
Seeding Date:	May 24, 2023
Seeding Equipment:	Versatile Air Drill
Variety:	L340PC
Harvest Date:	Sept 18, 2023

Nitrogen Application

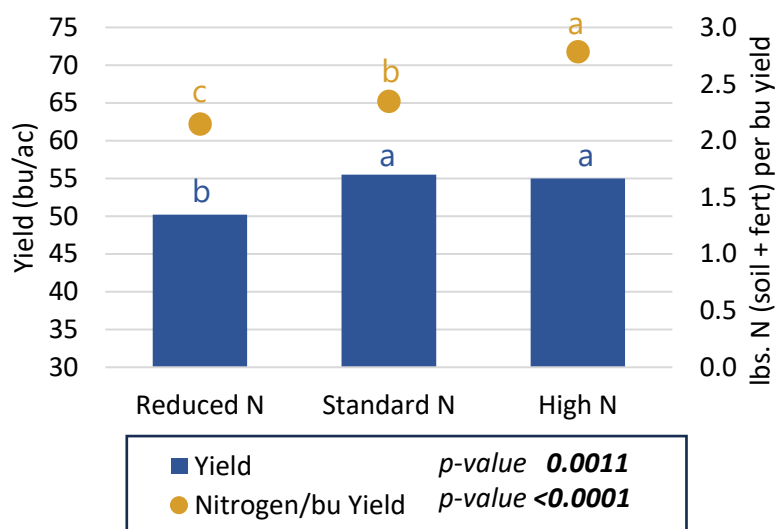
Source:	46-0-0
Placement:	Banded
Timing:	Spring Pre-Seed

Summary

- **Plant Establishment:** N rate had no influence on plant counts in this trial.
- **Tissue N:** N rate had no significant influence on N tissue content at bolting in this trial.
- **Grain Moisture:** Nitrogen rate had no influence on grain moisture in this trial.
- **Grain Yield:** There was a significant reduction in grain yield from the standard farm practice when N was reduced. There was no increase in yield as N rate increased from the standard to the high N rate.
- **Nitrogen Efficiency:** The reduced N treatment was most efficient with N supply, using 2.1 lbs. N per bushel of grain yield produced.
- The high N treatment produced the same yield as the farm standard N practice but reduced N efficiency from 2.3 to 2.8 lbs. N per bushel of grain yield produced.

Treatment	Fertilizer N	Total N (Soil + Fert)
<i>lbs. N / ac</i>		
1 Reduced N Rate	90	108
2 Standard N Rate	112.5	125.5
3 High N Rate	135	153

Grain Yield



	Plant Counts at 4 Leaf (ft ²)	N Tissue at Bolting (%)	Harvest Grain Moisture (%)
1. Reduced N	6.4	6.4	8.4
2. Standard N	6.3	6.4	8.3
3. High N	6.3	6.5	8.4
<i>p-value</i>	0.9539	0.5907	0.3944

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

	Apr	May	June	July	Aug	Total
Rainfall (mm)	36.5	18.6	40.6	39.7	54	189
% of Normal Rainfall	108%	33%	45%	42%	69%	47%
Avg Daily Temp (C)	-0.3	14	19	17	18	

Agronomic support for this trial provided by:

