

Trial Summary

Canola Seeding Rate Trial

Research Question:

Can Manitoba canola farms reduce their seeding rates without sacrificing yield to increase return on investment?

Treatments:

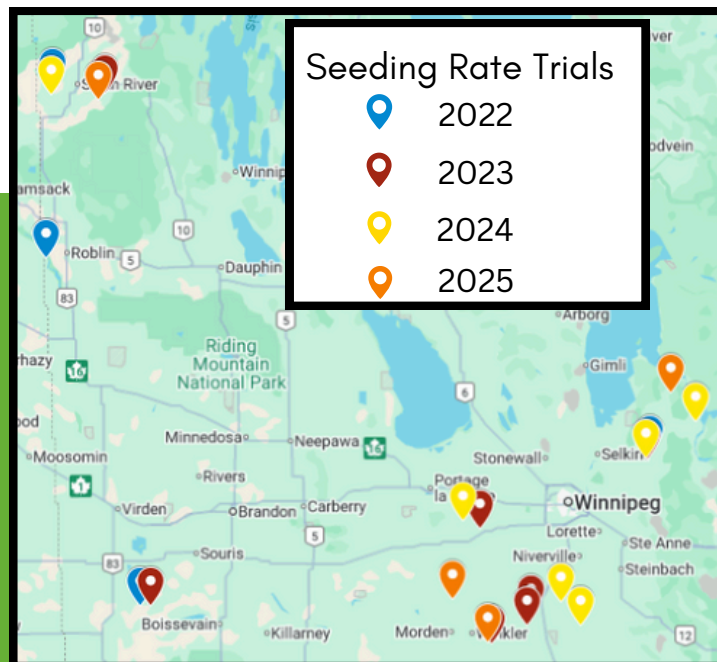
1. Reduced Seeding Rate (75%)
2. Standard Seeding Rate (100%) – Farm Normal
3. High Seeding Rate (125%)

Trial Setup:

Randomized complete block, each treatment was one equipment width x field length, with 4 replicates per location (12 strips per location)

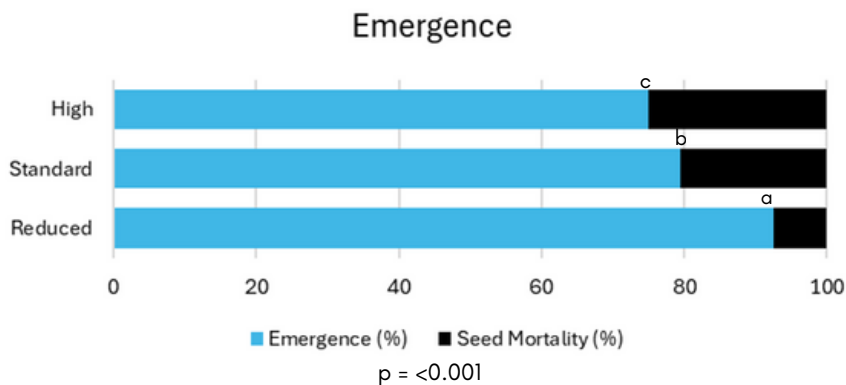
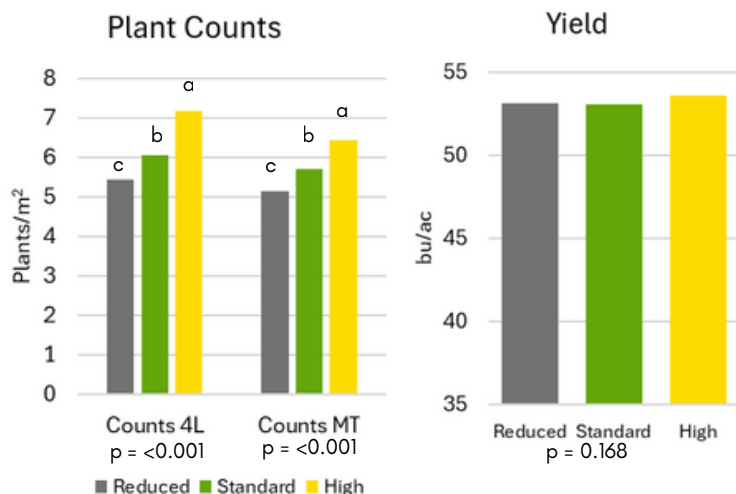
Data Collection:

Plant Counts, Emergence, Survival, Yield



Background: The recommended plant stand for canola is 5–8 plants/ft² to maximize return on seed investment while minimizing risks associated with low plant populations such as reduced competitive ability against pests. The emergence of canola seed in the field is highly variable and dependent on farm management growing season conditions. Therefore, it is important that growers understand emergence in their operations and how that may change with seeding rate decisions.

Disclaimer: Risks associated with low plant populations outside the scope of this trial include reduced competitiveness against field pests.



2022 – 2025 Summary:

Overall, there was no significant influence of seeding rate on grain yield. When seeding rates were reduced by 25% emergence increased by 13% and when seeding rates were increased by 25% emergence was 4% lower than the standard seeding rates. This indicates that, on average, seeding rates can be lowered without a large reduction in plant stand to increase economic return on investment.

Within each trial location, treatments with different lowercase letters are significantly different at 95% confidence level (p < 0.05). Locations with no lowercase letters listed indicate an insignificant treatment effect.

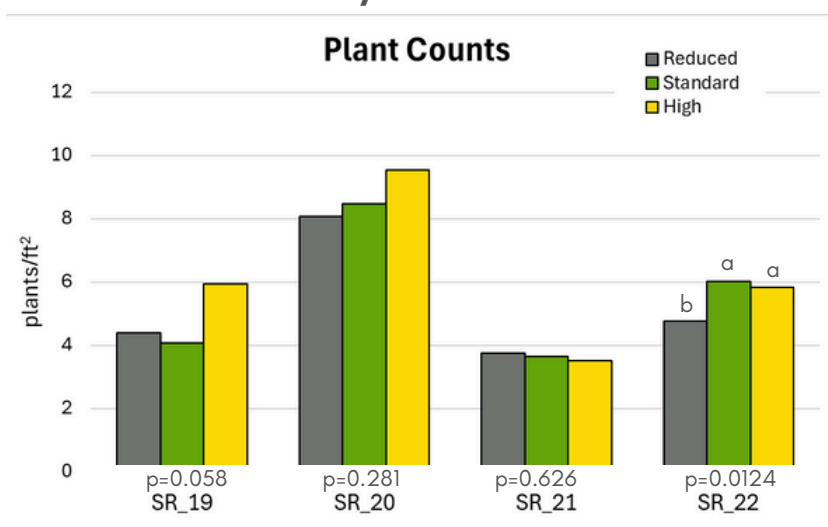
2025 Results Summary

Canola Seeding Rate Trials

2025 Seeding Rate Trial Sites

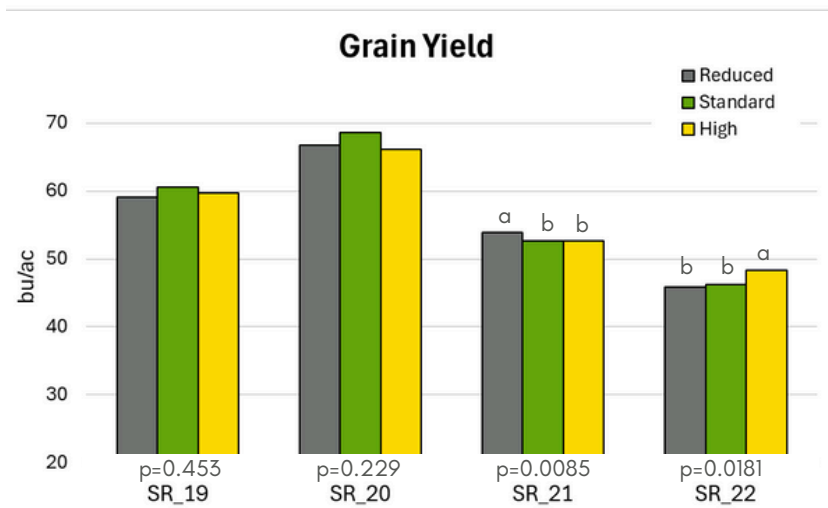
Trial ID	RM	Seeding Equipment (Row Spacing)	Seeding Rate			TKW (g)
			Reduced	Standard	High	
SR_19	Alexander	Horsch Avatar Disc Drill (10 in)	3.2 lbs/ac 322,553 seeds/ac	4.2 lbs/ac 423,351 seeds/ac	5.2 lbs/ac 524,149 seeds/ac	4.5
SR_20	Thompson	John Deere 1895 Disc Drill (7.5 in)	3.45 lbs/ac 306,843 seeds/ac	4.6 lbs/ac 409,124 seeds/ac	6.9 lbs/ac 613,686 seeds/ac	5.1
SR_21	Rhineland	John Deere Planter (10 in)	3 lbs/ac 283,495 seeds/ac	4 lbs/ac 377,993 seeds/ac	5 lbs/ac 472,492 seeds/ac	4.8
SR_22	Minitonas	Bourgault 5710 (10 in)	3.9 lbs/ac 340,500 seeds/ac	5.2 lbs/ac 454,000 seeds/ac	6.5 lbs/ac 567,500 seeds/ac	5.2

2025 Results Summary



Plant Establishment

Plant counts at the 4-leaf stage were not significantly influenced by seeding rate in three of four trials - the fourth trial showed the reduced seeding rate treatment significantly lower plant counts relative to the standard and high treatments. Two of the four trials in 2025, used a standard seeding rate which produced stand establishment lower than the recommended 5 plants/ft².



Grain Yield

Two of four trials observed no significant difference in grain yield across seeding rate treatments. The remaining two trials showed significant yield increases towards both extremes in seeding rate: SR_21 had a significant increase in grain yield with the reduced seeding rate (3 lbs/ac) compared to the farm standard, while SR_22 had a significant increase in yield with the high seeding rate treatment (6.5 lbs/ac).

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