Soybean Seeding Rate Trial

Trial ID: 2024-SSR12 – R.M. of Minitonas-Bowsman

Objective: Quantify the agronomic and economic impacts of different soybean seeding rates.

Summary: The high seeding rate (214,000 seeds/ac) yielded 3.3 bu/ac more than the low seeding rate (155,000 seeds/ac). The yield gain resulted in an increase in profit of $13/ac. There were no significant yield differences between seeding rates of 185,000 vs. 155,000 seeds/ac and between 214,000 vs. 185,000 seeds/ac.

Trial Information

Treatment	155k vs 185k vs 214k
Soil Texture	Clay Loam
Previous Crop	LL Canola
Tillage	Conventional Till
Seeding Equipment	70ft Seedhawk
Seeding Date	May 12
Variety	DX8
Germination	90%
Row Spacing	10”
Harvest Date	September 29

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	63.1	67	41.9	118	290
Normal	45.4	84.2	85.6	68.3	283.5
% Norm	139%	80%	49%	173%	102%

Plant Stand (plants/ac) ⱡ

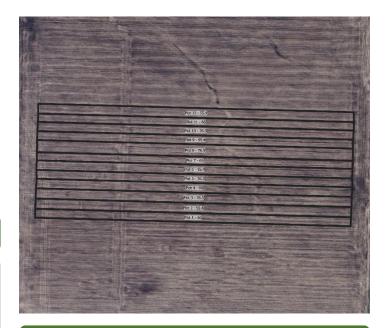|	VC	R4
155k	131.000 B	137,000 B
185k	156,000 AB	144,000 B
214k	171,000 A	176,000 A

ⱡ Plant counts at VC and R4 stage: Different letters in the column indicate statistically different values
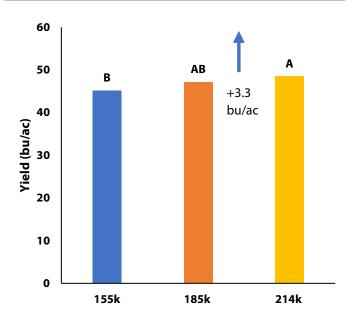
Plant Establishment and Survivability ⱡ

	Establishment at VC	Survivability to R4	Change VC to R4
155k	85%	88%	3%
185k	84%	78%	-6%
214k	80%	82%	2%

ⱡ % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Trial Layout

Yield by Treatment

MANITOBA Pulse & Soybean GROWERS
T 204 745.6488
www.manitobapulse.ca

Soybean Seeding Rate Trial

Overall Yield & Economics

	Mean (bu/ac)	Cost ᵻ	Change in Profit ᵻᵻ
155k	45.2 B	$70/ac	
185k	47.1 AB	$83/ac	-$13/ac
214k	**48.5 A**	$96/ac	$13/ac

P-Value	0.024	**Economic**	155k → 185k **No**
CV	2.5%		155k → 214k **Yes**
Significance	**Yes**		185k → 214k **No**

ᵻ Based on a $62.94/unit soybean seed costs (Source: Manitoba Agriculture 2024 Cost of Production Guidelines)

ᵻᵻ Change in profit is calculated as the difference in cost between seeding rate treatments. When a significant yield difference occurs, the change in profit is calculated from profit gained or lost due to yield differences, treatment cost/ac and the current soybean market price of $12/bu (Source: Manitoba Markets Grains and Oilseed Prices November 2024)