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Soybean Seeding Rate Trial

Trial ID: 2023-SSR07 – R.M. of Ritchot

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

Summary: There were no significant yield differences among seeding rates of 133,000, 163,000 and 193,000 seeds/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	133k vs. 163k vs. 193k
Soil Texture	Clay
Previous Crop	Canola
Tillage	Conventional
Seeding Equipment	42 ft Disc Drill
Seeding Date	May 20
Variety	NSC Winkler RR2X
Germination	87%
Row Spacing	7.5"
Harvest Date	September 30

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	33.4	33.6	62	49.4	179
Normal	57.5	88	70	75.8	291
% Norm	58%	38%	90%	65%	61%

Plant Stand (plants/ac)

	V1	R6
133k	112,000	112,000
163k	133,000	135,000
193k	139,000	135,000

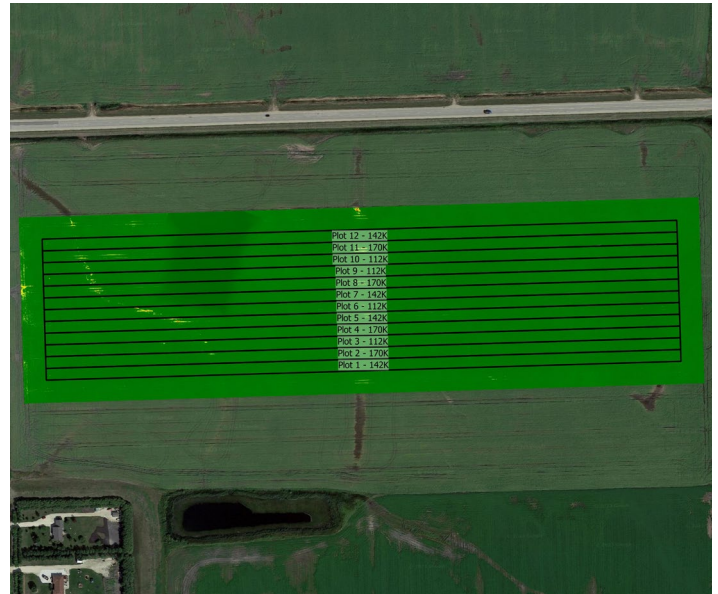
Plant Establishment and Survivability †

	Establishment at V1	Survivability to R6	Change V1 to R6
133k	84%	84%	0%
163k	82%	83%	+1%
193k	72%	70%	-2%

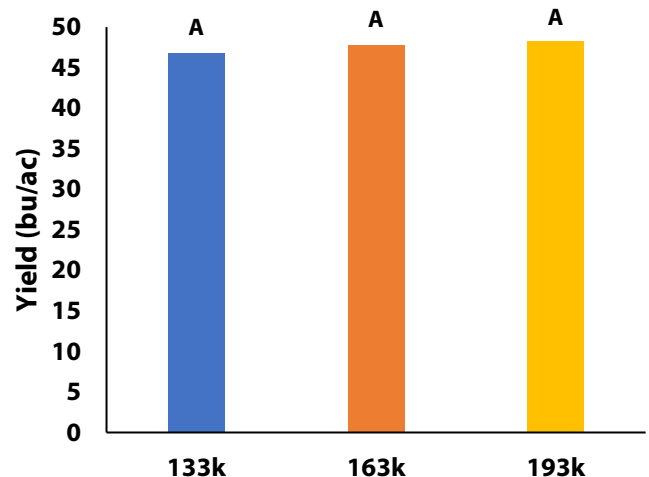
† % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Germination at this trial was 87%.

NDVI Field Image August 9



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
133k	46.8	\$65/ac	
163k	47.8	\$79/ac	-\$14.55/ac
193k	48.3	\$94/ac	-\$29.10/ac
P-Value	0.203	Economic	133k → 163k No
CV	2.4%		133k → 193k No
Significance	No		163k → 193k No

† Based on a \$67.90/unit soybean seed costs (Source: Manitoba Agriculture 2023 Cost of Production Guidelines)

†† Change in profit is calculated as the difference in cost between seeding rate treatments. Because yields were not significantly different, there is no increased income to offset the increase in seed cost