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Soybean Seeding Rate Trial

Trial ID: 2023-SSR12 – R.M. of Brokenhead

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

Summary: There were no significant yield differences between seeding rates of 223,000, 260,000 and 297,000 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	223k vs. 260k vs. 297k
Soil Texture	Very Fine Sandy Loam
Previous Crop	Fall Rye
Tillage	Conventional
Seeding Equipment	60 ft Hoe Drill
Seeding Date	June 4
Variety	OAC Prudence
Germination	94%
Row Spacing	10"
Harvest Date	November 14

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	53.6	57.1	53	39	203
Normal	54	89.9	73	72.6	290
% Norm	99%	64%	73%	54%	70%

Plant Stand (plants/ac)

	V1	R5
223k	139,000 A	124,000
260k	156,000 A	148,000
297k	158,000 A	153,000

Plant Establishment and Survivability †

	Establishment at V1	Survivability to R5	Change V1 to R5
223k	62%	55%	-7%
260k	60%	57%	-3%
297k	53%	51%	-2%

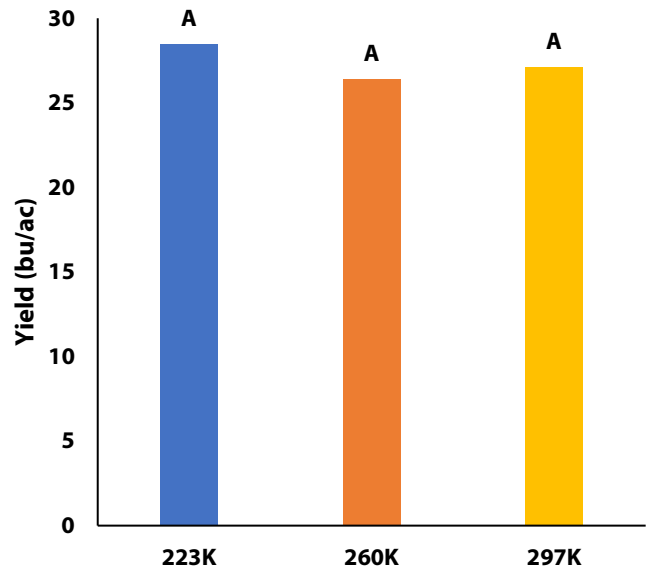
† % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Germination at this trial was 94%.

NDVI Field Image August 14



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
223k	28.5	\$108/ac	
260k	26.4	\$126/ac	-\$17.95/ac
297k	27.1	\$144/ac	-\$35.89/ac
P-Value	0.5172	Economic	223k → 260k No
CV	15.1%		223k → 297k No
Significance	No	no	260k → 297k 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