Soybean Seeding Rate Trial

Trial ID: 2023-SSR11 – R.M. of Grassland

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

Summary: There were no significant yield differences between 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	Loam
Previous Crop	Canola
Tillage	Zero Till
Seeding Equipment	60 ft Air Drill
Seeding Date	May 22
Variety	S001-D8X
Germination	93%
Row Spacing	12"
Harvest Date	September 10

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	36.4	94.8	10	31.2	172
Normal	61.1	89.8	68	72.3	292
% Norm	60%	106%	15%	43%	59%

Plant Stand (plants/ac)

	V4	R8
133k	145,000 B	113,000
163k	127,000 B	125,000
193k	173,000 A	164,000

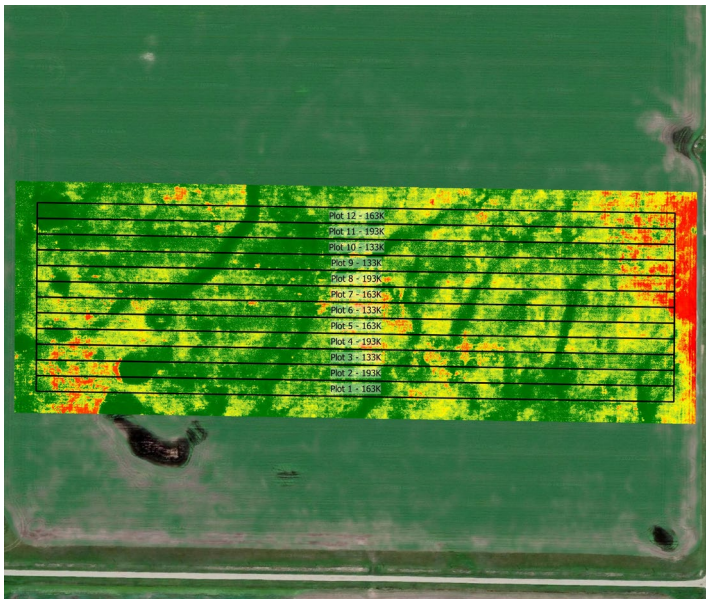
Plant Establishment and Survivability ǂ

	Establishment at V4	Survivability to R8	Change V4 to R8
133k	109%	85%	-24%
163k	78%	77%	-1%
193k	89%	85%	-5%

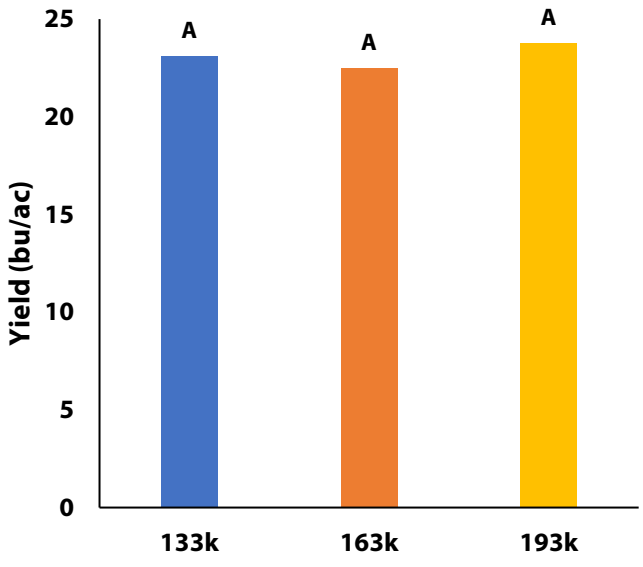
ǂ % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Germination at this trial was 93%.

NDVI Field Image August 8



Yield by Treatment



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Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂǂ
133k	23.1	$65/ac	
163k	22.5	$79/ac	-$14.55/ac
193k	23.8	$94/ac	-$29.10/ac
P-Value	0.3918	**Economic**	133k → 163k **No**
CV	6.6%		133k → 193k **No**
Significance	**No**		163k → 193k **No**

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

ǂ ǂ 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

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