Soybean Seeding Rate Trial

Trial ID: 2023-SSR08 – R.M. of Ste. Anne

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

Summary: There were no significant yield differences among seeding rates of 120,000, 150,000 and 180,000 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	120k vs. 150k vs. 180k
Soil Texture	Clay
Previous Crop	Wheat
Tillage	Conventional
Seeding Equipment	44 ft Planter
Seeding Date	May 20
Variety	NSC Winkler RR2X
Germination	96%
Row Spacing	22"
Harvest Date	September 19

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	8.3	73.4	60	30.9	172
Normal	58.1	91.3	80	66.1	296
% Norm	14%	80%	74%	47%	58%

Plant Stand (plants/ac)

	V2	R7
120k	86,000 B	104,000
150k	106,000 A	131,000
180k	123,000 A	149,000

Plant Establishment and Survivability†

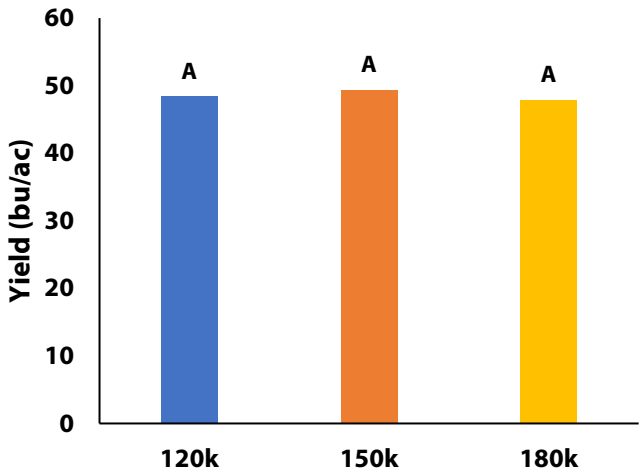
	Establishment at V1	Survivability to R6	Change V1 to R6
120k	72%	87%	+15%
150k	71%	87%	+16%
180k	69%	83%	+14%

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

Germination at this trial was 96%.

NDVI Field Image August 12

Yield by Treatment



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Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂǂ
120k	48.4	$58/ac	
150k	49.3	$73/ac	-$14.55/ac
180k	47.9	$87/ac	-$29.10/ac
P-Value	0.3695	**Economic**	120k → 150k **No**
CV	4.7%		120k → 180k **No**
Significance	**No**		150k → 180k **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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