Soybean Seeding Rate Trial

Trial ID: 2023-SSR04 – R.M. of De Salaberry

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, 148,000 and 175,000 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. 148k vs. 175k
Soil Texture	Clay
Previous Crop	Oats
Tillage	Conventional
Seeding Equipment	40 ft Planter
Seeding Date	May 16
Variety	S007-A2XS
Germination	96%
Row Spacing	20"
Harvest Date	September 27

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	19.5	45.9	59	32.5	157
Normal	52.6	94.7	70	51.7	269
% Norm	37%	48%	85%	63%	58%

Plant Stand (plants/ac)

	V2	R7
120k	98,000	101,000
148k	129,000	125,000
175k	145,000	140,000

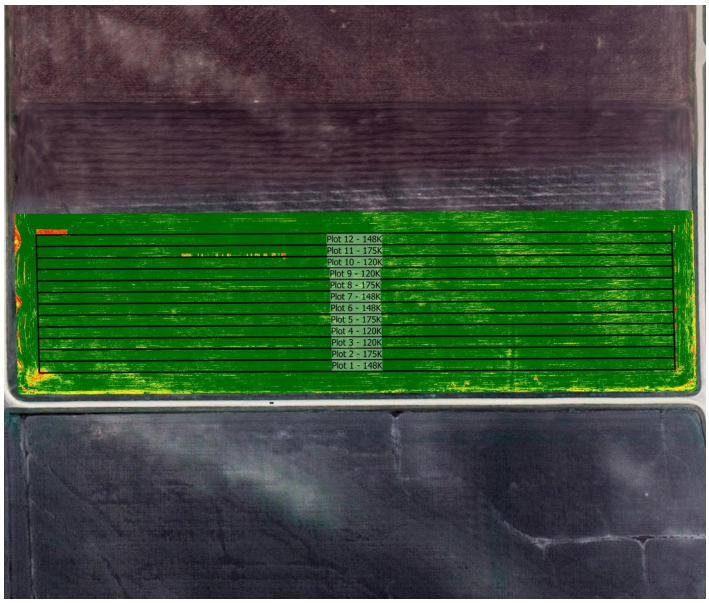
Plant Establishment and Survivability ǂ

	Establishment at V2	Survivability to R7	Change V2 to R7
120k	81%	84%	+3%
148k	87%	84%	-3%
175k	83%	80%	-3%

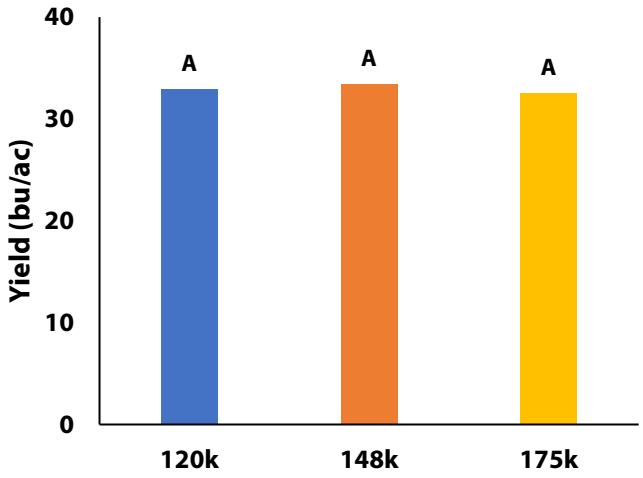
ǂ % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

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	32.9	$58/ac	
148k	33.5	$72/ac	-$13.58/ac
175k	32.5	$85/ac	-$26.68/ac
P-Value	0.677	**Economic**	120k → 148k **No**
CV	4.4%		120k → 175k **No**
Significance	**No**		148k → 175k **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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