

Soybean Seeding Rate Trial

Trial ID: 2023-SSR01 – R.M. of Grey

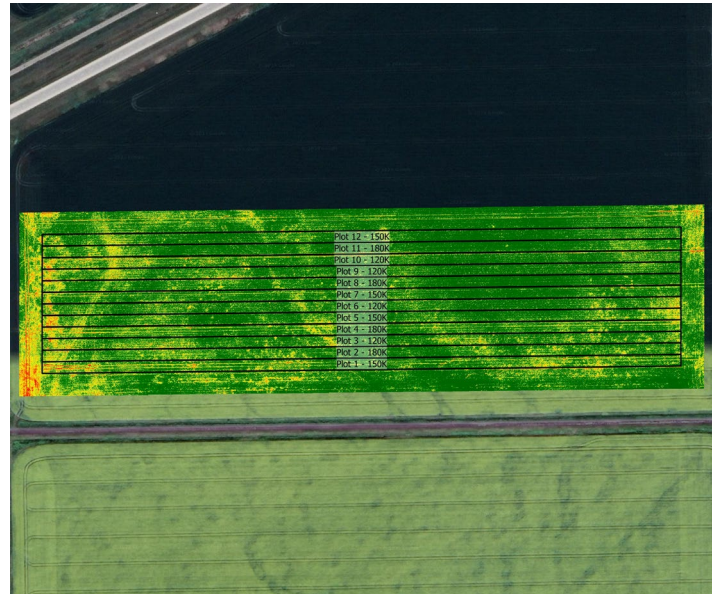
Objective: Quantify the agronomic and economic impacts of different soybean seeding rates.

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	Ryegrass
Tillage	Conventional
Seeding Equipment	42 ft Disc Drill
Seeding Date	May 11
Variety	DKB006-29
Germination	96%
Row Spacing	15"
Harvest Date	September 18

NDVI Field Image August 9



Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	22.5	22.8	19	30.9	95.1
Normal	53.8	80.6	66	71	271
% Norm	42%	28%	29%	44%	35%

Plant Stand (plants/ac)

	VE	R7
120k	94,000	108,000
150k	112,000	129,000
180k	122,000	145,000

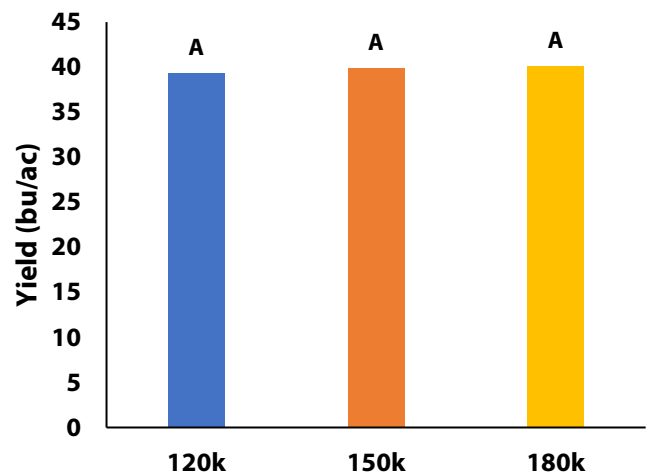
Plant Establishment and Survivability †

	Establishment at VE	Survivability to R7	Change VE to R7
120k	78%	90%	+12%
150k	75%	86%	+11%
180k	68%	80%	+12%

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

Germination at this trial was 96%.

Yield by Treatment





Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
120k	39.4	\$58/ac	
150k	39.9	\$73/ac	-\$14.55/ac
180k	40.2	\$87/ac	-\$29.10/ac
P-Value	0.522	Economic	120k → 150k No
CV	2.3%		120k → 180k No
Significance	No		150k → 180k 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

Additional Observations

This trial was hit with a hailstorm in early August when soybeans were at R5 (early seed forming stages). On August 4, a hail assessment was made throughout the field. On average, 30% defoliation was noted along with some stem breakage. Hail damage was observed to be most severe in the northwest area of the trial (plots 6 through 12).

