

Soybean Seeding Rate Trial

Trial ID: 2023-SSR10 – R.M. of Emerson-Franklin

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

Summary: There were no significant yield differences between 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	Fine Sandy Loam
Previous Crop	Wheat
Tillage	Conventional
Seeding Equipment	44 ft Planter
Seeding Date	May 22
Variety	P001A48X
Germination	96%
Row Spacing	22"
Harvest Date	September 27

NDVI Field Image August 11



Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	41.3	97	80	31.6	250
Normal	57.8	89.5	81	71.8	300
% Norm	71%	108%	99%	44%	83%

Plant Stand (plants/ac)

	V1	R7
120k	110,000 C	114,000
150k	138,000 B	142,000
180k	156,000 A	157,000

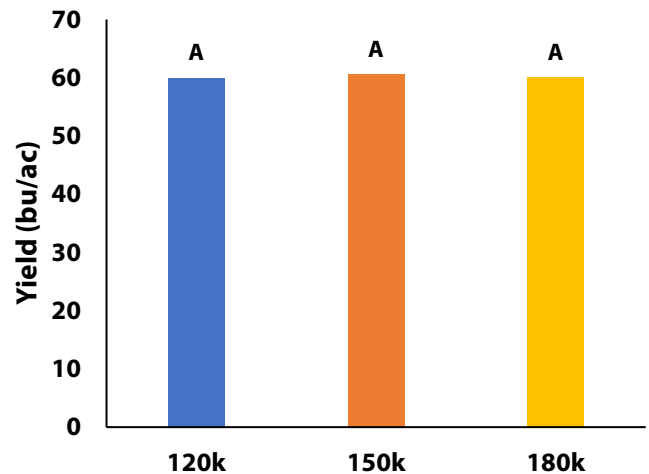
Plant Establishment and Survivability †

	Establishment at V1	Survivability to R7	Change V1 to R7
120k	91%	95%	+3%
150k	92%	95%	+3%
180k	86%	87%	+1%

† % 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





on-farm network
PARTICIPATORY • PRECISE • PROACTIVE

Soybean Seeding Rate Trial

Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
120k	59.9	\$58/ac	
150k	60.5	\$73/ac	-\$14.55/ac
180k	60.0	\$87/ac	-\$29.10/ac
P-Value	0.6680	Economic	120k → 150k No
CV	4%		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