

Soybean Seeding Rate Trial

Trial ID: 2023-SSR03 – R.M. of Brokenhead

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

Summary: There were no significant yield differences among seeding rates of 100,000, 130,000 and 160,000 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	100k vs. 130k vs. 160k
Soil Texture	Clay Loam
Previous Crop	Winter Wheat
Tillage	Conventional
Seeding Equipment	60ft Planter
Seeding Date	May 15
Variety	-
Germination	96%
Row Spacing	20"
Harvest Date	October 12

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	53.6	57.1	53	39	203
Normal	54	89.9	73	72.6	290
% Norm	99%	64%	73%	54%	70%

Plant Stand (plants/ac)

	V1	R7
100k	104,000	122,000
130k	110,000	131,000
160k	117,000	150,000

Plant Establishment and Survivability †

	Establishment at V1	Survivability to R7	Change V1 to R7
100k	104%	122%	17%
130k	85%	101%	16%
160k	73%	94%	21%

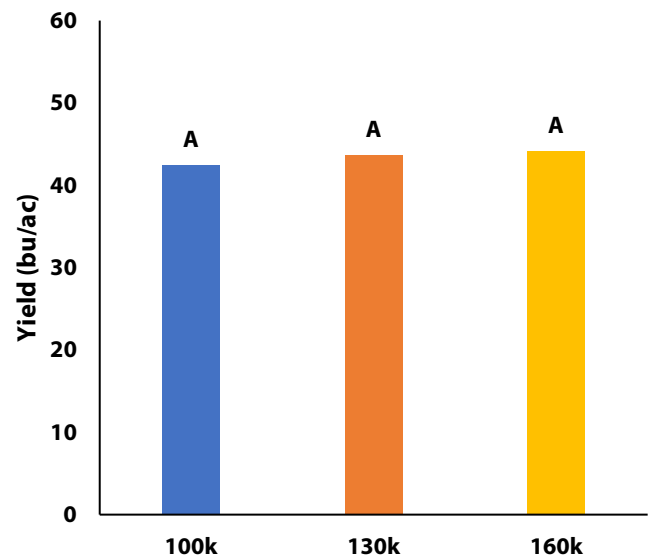
† % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Germination at this trial was 96%.

NDVI Field Image August 14



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
100k	42.5	\$49/ac	
130k	43.7	\$63/ac	-\$14.55/ac
160k	44.2	\$78/ac	-\$29.10/ac
P-Value	0.3146	Economic	100k → 130k No
CV	3.5%		100k → 160k No
Significance	No		130k → 160k 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