Soybean Seeding Rate Trial

Trial ID: 2023-SSR13 – R.M. of Minitonas - Bowsman

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

Summary: There were no significant yield differences between seeding rates of 130,000, 160,000 and 190,000 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

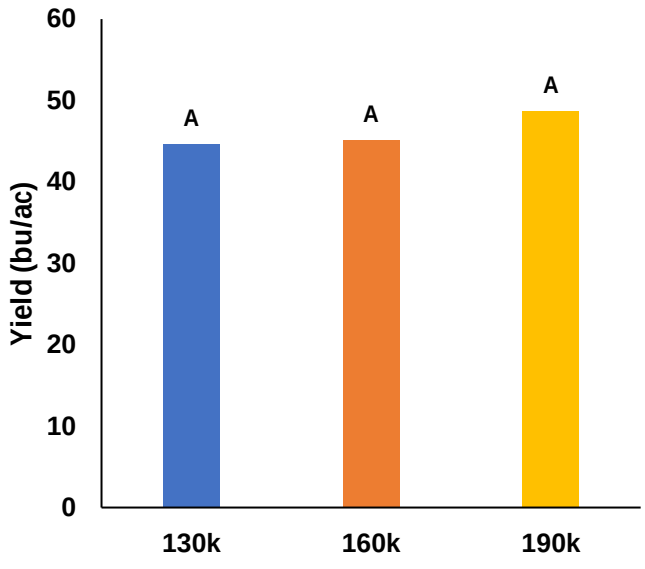
Treatment	130k vs. 160k vs. 190k
Soil Texture	Clay Loam
Previous Crop	Wheat
Tillage	Conventional
Seeding Equipment	70 ft SeedHawk
Seeding Date	May 16, 2023
Variety	S001-D8X
Germination	80%
Row Spacing	10″
Harvest Date	September 23

NDVI Field Image August 7

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	17.5	36.1	0.4	70	124
Normal	45.4	84.2	86	68.3	284
% Norm	39%	43%	0%	102%	44%

Yield by Treatment



Plant Stand (plants/ac)

	V2	R6
130k	134,000	132,000
160k	138,000	137,000
190k	171,000	170,000

Plant Establishment and Survivability[ł]

	Establishment at V2	Survivability to R6	Change V2 to R6
130k	103%	101%	-2%
160k	86%	86%	0%
190k	90%	90%	0%

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

Germination at this trial was 80%.

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Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂǂ
130k	44.7	$63/ac	
160k	45.1	$78/ac	-$14.55/ac
190k	48.7	$92/ac	-$29.10/ac
P-Value	0.098	**Economic**	130k → 160k **No**
CV	5.1%		130k → 190k **No**
Significance	**No**		160k → 190k **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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