Soybean Seeding Rate Trial

Trial ID: 2023-SSR06 – 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 165,000 and 220,000 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	165k vs. 220k
Soil Texture	Clay Loam
Previous Crop	Wheat
Tillage	Conventional
Seeding Equipment	35 ft Press Drill
Seeding Date	May 20
Variety	Rosser
Germination	98%
Row Spacing	7.5"
Harvest Date	October 16

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)

	V2	R6
165k	108,000	104,000
220k	158,000	160,000

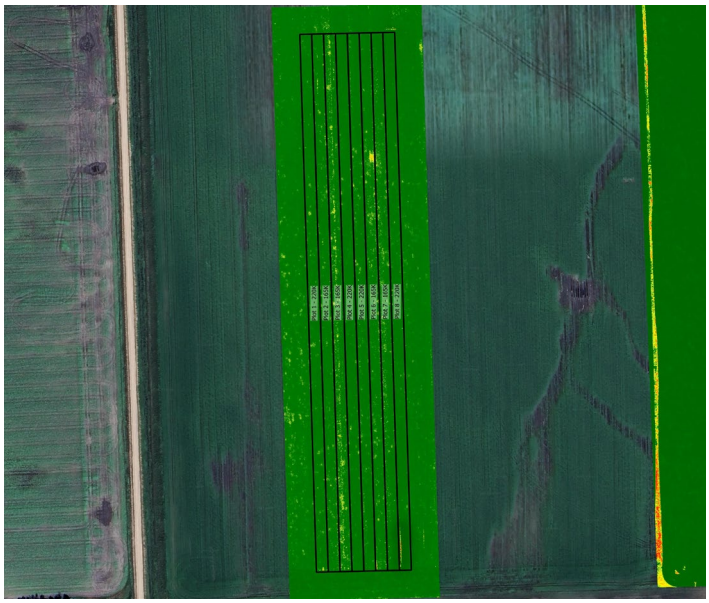
Plant Establishment and Survivability ǂ

	Establishment at V2	Survivability to R6	Change V2 to R6
165k	65%	63%	-2%
220k	72%	73%	+1%

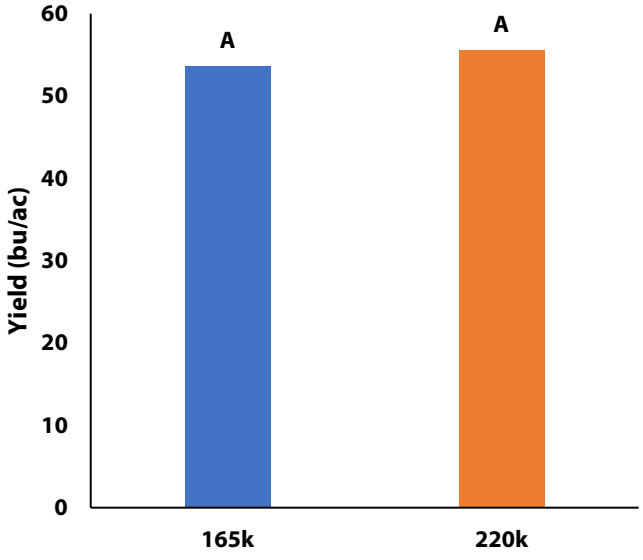
ǂ % establishment = plant count at V stages/seeding rate; % survivability = plant count at R stages/seeding rate

Germination at this trial was 98%.

NDVI Field Image August 14



Yield by Treatment



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MANITOBA Pulse Soybean GROWERS
T 204 745.6488
www.manitobapulse.ca

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Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂǂ
165k	53.6	$80/ac	
220k	55.5	$107/ac	-$26.68/ac
P-Value	0.0577	**Economic**	165k → 220k **No**
CV	2.8%		
Significance	**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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