Soybean Seeding Rate Trial

Trial ID: 2025-SSR05 – R.M. of Brokenhead

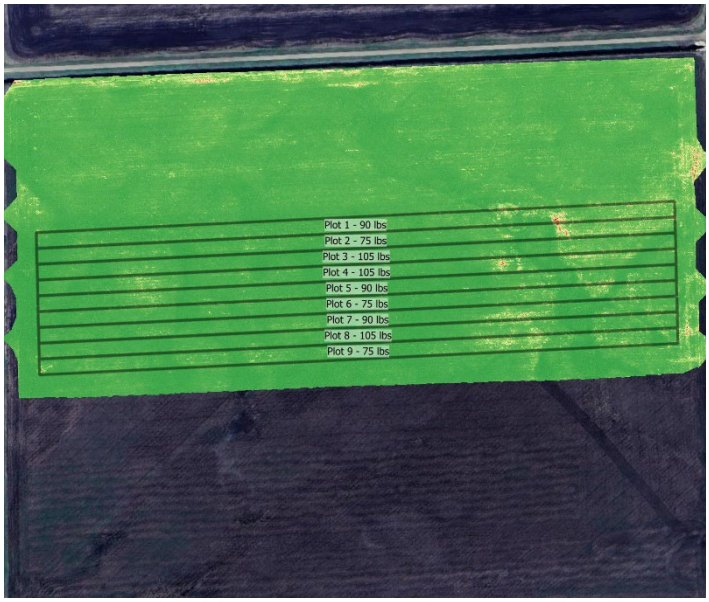
Objective: Quantify the agronomic and economic impacts of different soybean seeding rates.

Summary: There were no significant yield differences among seeding rates of 223,000, 267,000 and 312,000 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	223k vs. 267k vs. 312k
Soil Texture	Clay
Previous Crop	n/a - too wet to seed
Tillage	Zero Tillage
Seeding Equipment	60 ft Air Drill
Seeding Date	5/30/2025
Variety	OAC Prudence
Germination	91%
Row Spacing	10 in.
Harvest Date	11/20/2025

NDVI Field Image August 12



Precipitation (mm)

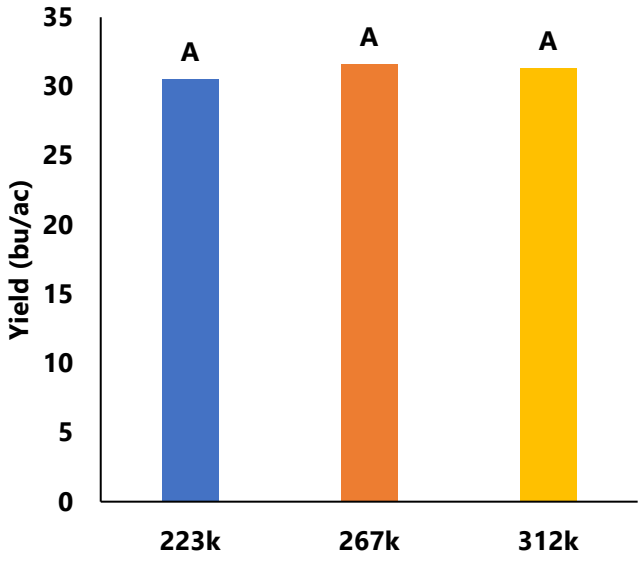
	May	June	July	Aug	Total
Rainfall	15.2	54.1	48.7	69.9	187.9
Normal	65.02	89.83	77.24	74.64	306.73
% Norm	23%	60%	63%	94%	61%

Plant Stand (plants/ac)

	V3	R5
223k	148,000 B	137,167 B
267k	154,167 AB	149,333 B
312k	198,333 A	190,333 A

ŧ Values in columns followed by different letters are significantly different (p-value <0.05).

Yield by Treatment



Plant Establishment and Survivability ŧ

	Establishment at V3	Survivability to R5	Change V3 to R5
223k	66%	62%	-4%
267k	58%	56%	-2%
312k	64%	61%	-3%

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

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Soybean Seeding Rate Trial

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Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂǂ
223k	30.5	$95.57/ac	
267k	31.6	$114.43/ac	-$18.86/ac
312k	31.3	$133.71/ac	-$38.14/ac
P-Value	0.4309	**Economic**	223k → 267k **No**
CV	3.3%		223k → 312k **No**
Significance	**No**		267k → 312k **No**

ǂ Based on an estimated soybean seed cost of $60.00/unit (1 unit = 140,000 seeds)

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

Field Observations

Challenging dry spring soil conditions (left photo taken June 13 at seeding) and patchy emergence on July 11 (V3) (right photo) was observed at the trial site. This could have contributed to low plant stands (average early season establishment between seeding rates was 63%) compared to target seeding rates.