Soybean Seeding Rate Trial

Trial ID: 2021-SSR02 – R.M. of Grey

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

Summary: There was no significant yield difference between 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
Previous Crop	Oats
Tillage	Conventional
Seeding Equipment	60 ft Planter
Seeding Date	May 8
Variety	DKB005-52
Germination	86%
Row Spacing	20"
Harvest Date	September 18

Precipitation (mm)

	May	Jun	Jul	Aug	Total
Rainfall	49.5	70.7	25.3	64.3	209.8
Normal	53.8	80.6	65.7	71	271.1
% Normal	92%	88%	39%	91%	77%

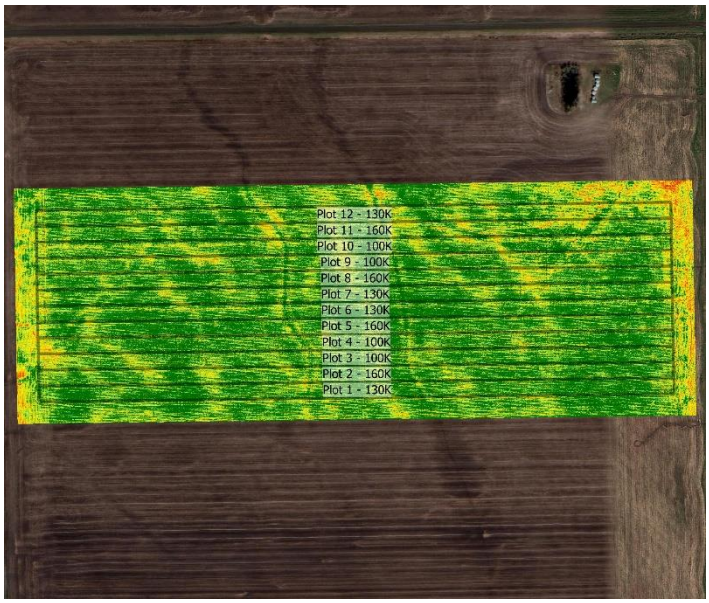
Plant Stand (plants/ac)

	V2	R8
100k	39,000	40,000
130k	46,000	85,000
160k	58,000	96,000

Early Season Observations May 26

Emergence was variable throughout the trial area, with some delayed emergence as seen in the series of images above.

NDVI Field Image August 16



Late Season Observations September 10

Very distinct differences in branching were observed between seeding rate treatments, with more branches per plant at the lowest seeding rate, compared to the medium and high seeding rates.

[Additional On-Farm Network Research Reports]

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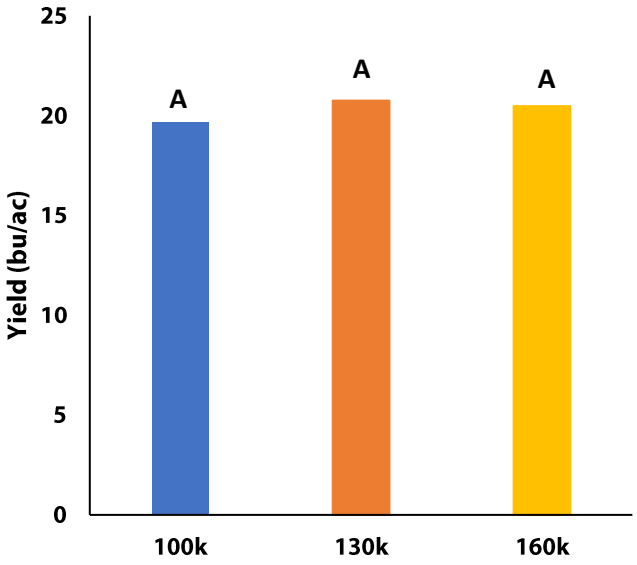
Yield by Treatment



Overall Yield & Economics

	Mean (bu/ac)	Cost†	Change in Profit/ac††
100k	20.0	$47/ac	
130k	20.8	$61/ac	-$14/ac
160k	20.5	$75/ac	-$28/ac
P-Value	0.5063	**Economic**	100k → 130k No
CV	6.7%		100k → 160k No
Significance	**No**		130k → 160k No

† Based on MB Agriculture 2020 Cost of Production Guidelines ($65.30/unit)

†† 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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