Soybean Seeding Rate Trial

Trial ID: 2025-SSR01 – R.M. of Emerson – Franklin

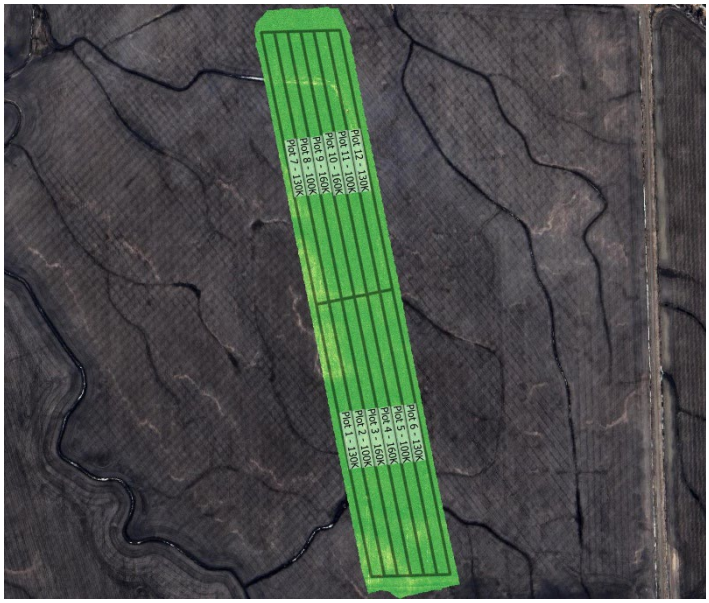
Objective: Quantify the agronomic and economic impacts of different soybean seeding rates.

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	Wheat
Tillage	Minimum Till
Seeding Equipment	88 ft Planter
Seeding Date	5/8/2025
Variety	DKB006-80
Germination	88%
Row Spacing	22 in.
Harvest Date	9/27/2025

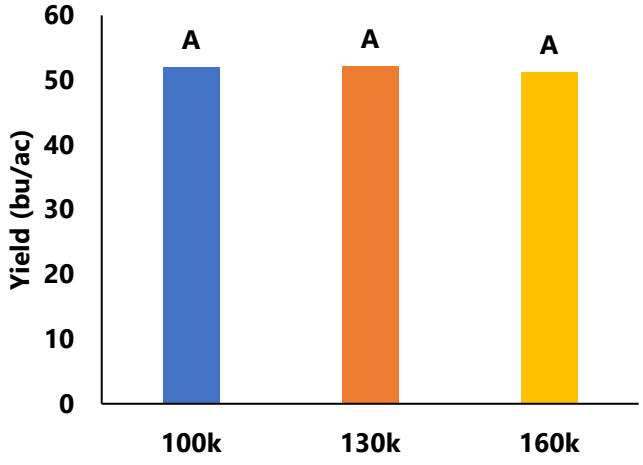
NDVI Field Image August 15



Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	38.7	44.8	70.3	38.9	192.7
Normal	73.61	95.44	73.89	64.32	307.26
% Norm	53%	47%	95%	60%	63%

Yield by Treatment



Plant Stand (plants/ac)

	R2	R5
100k	76,875 C	79,000 B
130k	104,750 B	105,875 A
160k	131,750 A	130,625 A

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

Plant Establishment and Survivability ǂ

	Establishment at R2	Survivability to R5	Change R2 to R5
100k	77%	79%	-2%
130k	81%	81%	-1%
160k	82%	82%	1%

ǂ % 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
100k	51.9	$42.86/ac	
130k	52.1	$55.71/ac	-$12.86/ac
160k	51.2	$68.57/ac	-$25.71/ac
P-Value	0.9831	**Economic**	100k → 130k **No**
CV	9.2%		100k → 160k **No**
Significance	**No**		130k → 160k **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

Despite only 79,000 plants/ac in the late season plant count at R5 stage, the 100,000 seeds/ac seeding rate treatment had a very similar yield as the two higher seeding rate treatments of 130,000 and 160,000 seeds per acre (Pictured above: plants in the trial area on July 9 at R2 stage).

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