Soybean Seeding Speed Trial

Trial ID: 2025-SSS05 – R.M. of Springfield

Objective: Quantify the agronomic and economic impacts of different seeding speeds on soybean production.

Summary: There was no significant yield difference between seeding speeds of 5 mph, 7 mph and 9 mph. The 9 mph speed resulted in less uniform plant to plant spacing compared to the 5 mph and 7 mph speeds. There was no significant difference in plant stand and seeding depth between seeding speeds.

Trial Information

Treatment	5 mph vs. 7 mph vs. 9 mph
Soil Texture	Clay
Previous Crop	Wheat
Tillage	Conventional Tillage
Seeding Equipment	44 ft Planter
Seeding Date	5/6/2025
Variety	Mao R2X
Seeding Rate	188,000 seeds/ac
Row Spacing	22 in.
Harvest Date	9/26/2025

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	27.5	59.9	32	50	169.4
Normal	74.95	94.78	86.21	82.37	338.31
% Norm	37%	63%	37%	61%	50%

Plant Stand (plants/ac) ǂ

	V2	R6
5 mph	141,125 A	139,250 A
7 mph	135,375 A	132,500 A
9 mph	143,000 A	139,000 A

ǂ Columns followed by different letters are significantly different from one another

Plant Establishment and Survivability ǂ

	Establishment at V2	Survivability to R6	Change V2 to R6
5 mph	75%	74%	-1%
7 mph	72%	70%	-2%
9 mph	76%	74%	-2%

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

RBG Field Image August 11 ǂ

ǂ An RBG image was used in place of NDVI imaging due to technical difficulties with NDVI imaging.

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Seeding Depth ǂ

	Average Seeding Depth (in.)
5 mph	1.10 A
7 mph	1.01 A
9 mph	1.04 A

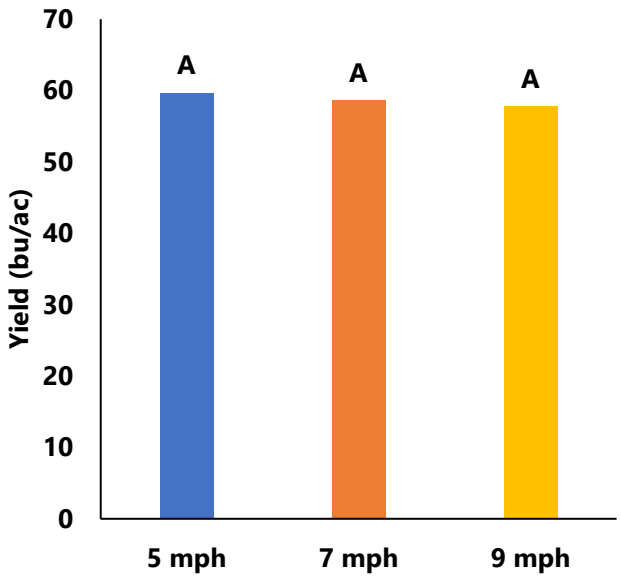
ǂ Seeding depths in columns followed by different letters are significantly different from one another

Plant Spacing Uniformity ǂ

	Uniformity (in.)
5 mph	1.56 B
7 mph	1.78 B
9 mph	1.91 A

ǂ Uniformity in columns followed by different letters are significantly different from one another. Uniformity was calculated by taking the standard deviation of plant-to-plant spacing measured in inches during V-stages.

Yield by Treatment



Overall Yield & Economics

	Mean (bu/ac)	Change in Profit ǂ
5 mph	59.7	n/a
7 mph	58.6	n/a
9 mph	57.8	n/a
P-Value	0.0528	
CV	2.1%	
Significance	**No**	**Economic N/A**

ǂ The economics of changing seeding speed are not calculated since factors like seeding time per acre and fuel consumption were not fully assessed.

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