

Soybean Single Inoculant Trial

Trial ID: 2024-S1IN02 – R.M. of Brokenhead

Objective: Quantify the agronomic and economic impacts of seed-applied inoculant (single inoculation) vs. no inoculant in soybean fields

Summary: Nodulation was similar between treatments and agronomically sufficient. There was no significant yield difference between soybeans with and without a single inoculant. Due to the lack of yield response, there was a decrease in profit/ac in the inoculated area of the trial, equivalent to the cost of the seed-applied inoculant.

Trial Information

Treatment	Nodulator Duo SCG vs Untreated
Last Soybean Crop	2020
Soybean History	10+ year history
Soil Texture	Clay Loam
Previous Crop	Fall Rye
Tillage	Conventional Till
Seeding Date	May 26
Variety	OAC Prudence
Seeding Rate	283,000 seeds/ac
Row Spacing	10"
Harvest Date	October 20

Precipitation (mm)

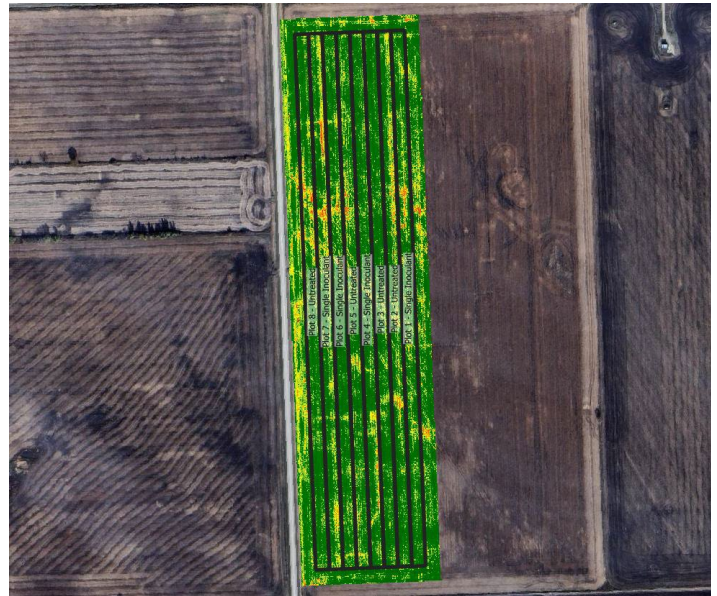
	May	June	July	Aug	Total
Rainfall	76.5	95.4	50.9	41.5	264.3
Normal	54	89.9	73.4	72.6	289.9
% Norm	142%	106%	69%	57%	91%

Nodulation†

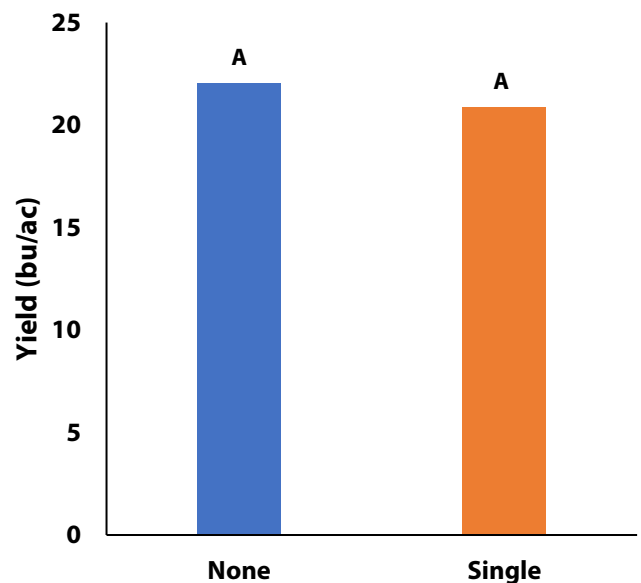
	Average nodulation rating @ R2
Single	4
None	4

† 0 = no nodules, 1 = Poor (<5/plant), 2 = Fair (<10/plant), 3 = Good (<20/plant), 4 = Excellent (>20/plant). Averages followed by different letters are significantly different at $\alpha = 0.05$

NDVI Field Image August 11



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
Single Inoculant	20.9	\$3/ac	-\$3/ac
Untreated	22.0		
Yield Difference	-1.1		
P-Value	0.079		
CV	2%		
Significance	No	Economic	No

† Based on an estimated cost for granular in-furrow inoculant

†† Because yields were not significantly different, there was no increased income to offset the cost of the single inoculant