

Soybean Single Inoculant Trial

Trial ID: 2024-S1IN01 – R.M. of Hanover

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	Signum Soybean vs Untreated
Last Soybean Crop	2021
Soybean History	5+ year history
Soil Texture	Clay Loam
Previous Crop	Wheat
Tillage	Conventional Till
Seeding Date	May 10
Variety	DKB006-80
Seeding Rate	210,000 seeds/ac
Row Spacing	10"
Plant Stand @ V2	158,000 plants/ac
Harvest Date	October 1

Precipitation (mm)

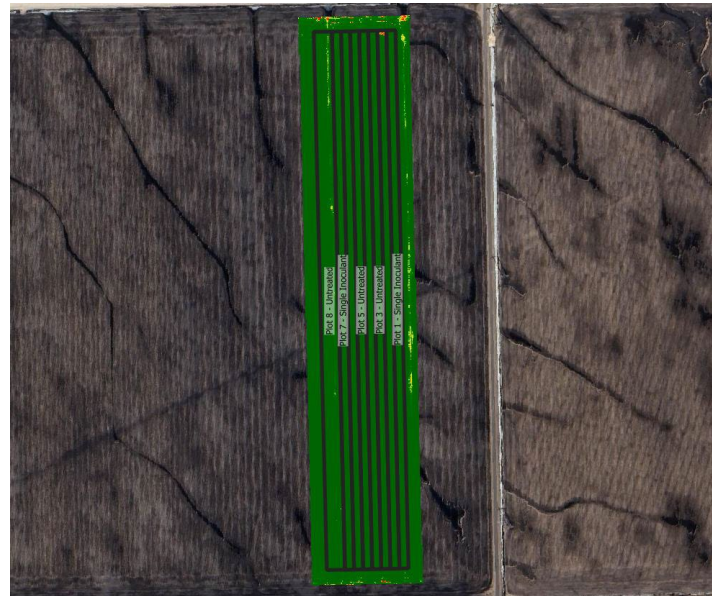
	May	June	July	Aug	Total
Rainfall	94.8	100	63.3	59.2	317.3
Normal	58.1	91.3	80.1	66.1	295.6
% Norm	163%	110%	79%	90%	107%

Nodulation †

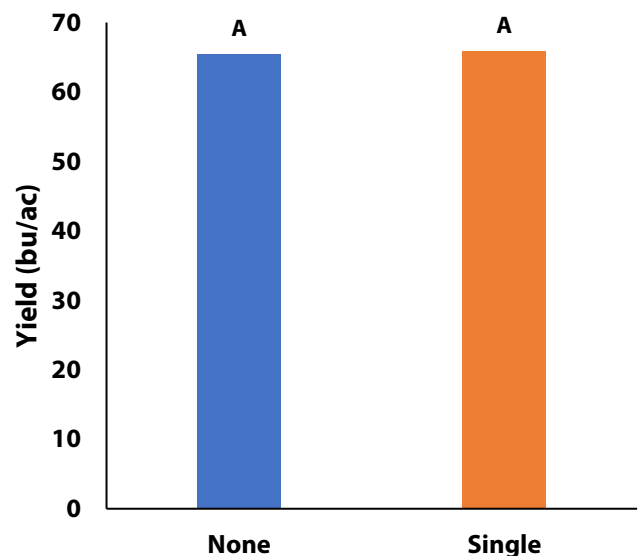
	Average nodulation rating @ R2
Single	4
None	4

† 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	65.9	\$3/ac	-\$3/ac
Untreated	65.4		
Yield Difference	0.5		
P-Value	0.524		
CV	1.3%		
Significance	No	Economic	No

† Based on an estimated cost for on-seed inoculant

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