

# Soybean Single Inoculant Trial

**Trial ID:** 2021-S1IN03 – R.M. of Montcalm

**Objective:** Quantify the agronomic impacts of seed applied inoculant (single inoculation) vs. no inoculant in soybean fields. This trial requires a minimum field history of three previous soybean crops.

**Summary:** Nodulation was the same, and agronomically sufficient, for both single and uninoculated soybeans. 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

<b>Treatment</b>	1x XiteBio® SoyRhizo®
<b>Last Soybean Crop</b>	2018
<b>Soybean History</b>	3-year history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Canola
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 12
<b>Variety</b>	Stanley
<b>Seeding Rate</b>	183 000 seeds/ac
<b>Row Spacing</b>	30"
<b>Plant Stand @ V1</b>	115 000 plants/ac
<b>Harvest Date</b>	October 1

## Precipitation (mm)

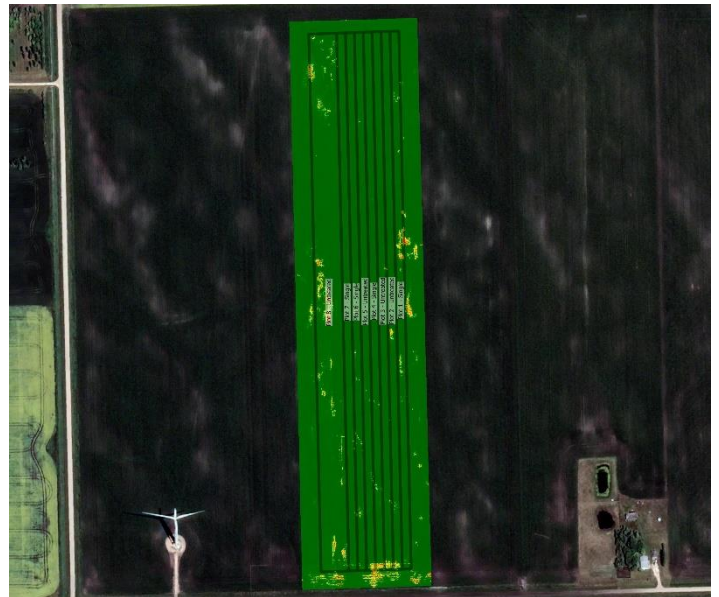
	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	46.3	63.6	32.3	142	284
<b>Normal</b>	56.4	85.2	75.4	65.5	282.5
<b>% Normal</b>	82%	75%	43%	216%	101%

## Nodulation†

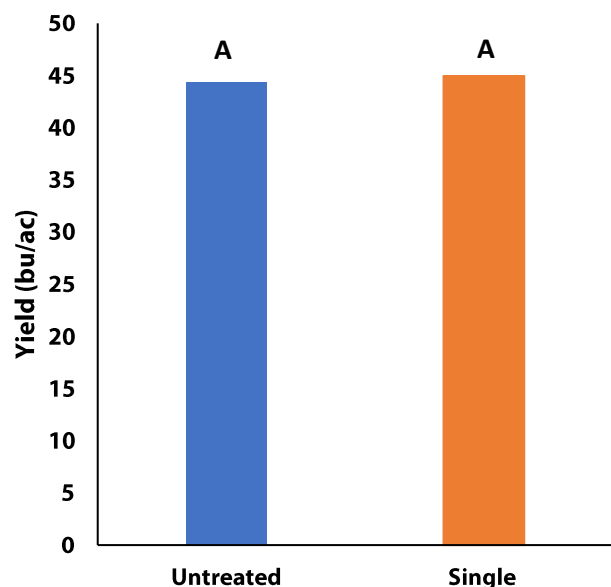
	Average nodulation rating @ R1
<b>Single</b>	3.2
<b>None</b>	3.2

† 0 = no nodules, 1 = Poor (<5/plant), 2 = Fair (<10/plant), 3 = Good (<20/plant), 4 = Excellent (>20/plant)

## NDVI Field Image August 13



## Yield by Treatment





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### Overall Yield & Economics

	Mean (bu/ac)	Cost <sup>†</sup>	Change in Profit/ac <sup>††</sup>
Single Inoculant	45.0	\$3.50/ac	-\$3.50/ac
Untreated	44.3		
Yield Difference	0.7		
P-Value	0.6692		
CV	4.1%		
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. Profit/ac decreased by the cost of single inoculant as a result.