

# Soybean Single Inoculant Trial

**Trial ID: 2022-S1IN02 – R.M. of MacDonald**

**Objective:** Quantify the agronomic and economic 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 very similar between treatments. 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 LALFIX PROYIELD (liquid on-seed)
<b>Last Soybean Crop</b>	2018
<b>Soybean History</b>	3-yr history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Oats
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 26
<b>Variety</b>	DKB008-48
<b>Seeding Rate</b>	183,000 seeds/ac
<b>Row Spacing</b>	20"
<b>Plant Stand @ V1</b>	102,000 plants/ac
<b>Harvest Date</b>	October 19

## Precipitation (mm)

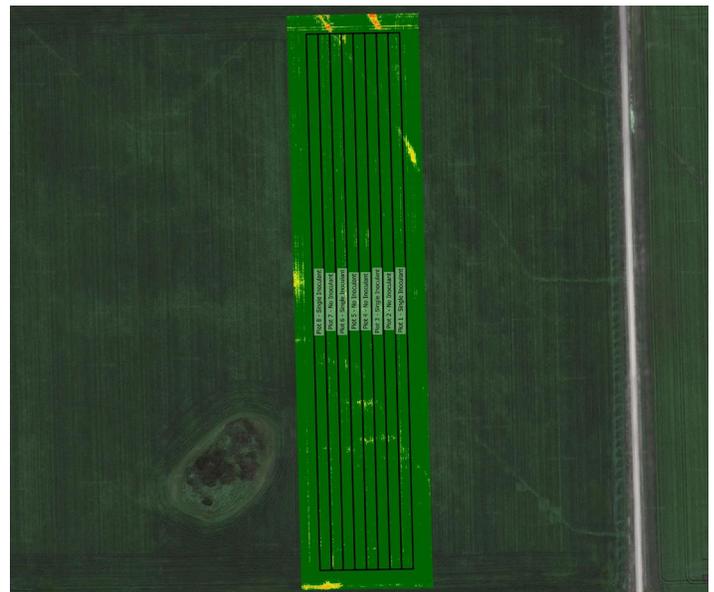
	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	144.2	62.8	147.5	86.4	440.9
<b>Normal</b>	58.5	92	77.8	67.6	295.9
<b>% Normal</b>	246%	68%	190%	128%	149%

## Nodulation (R2)<sup>†</sup>

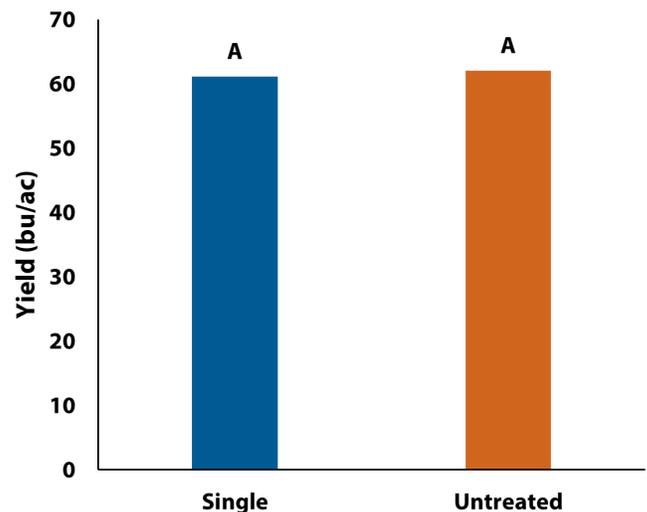
	Average nodulation rating
<b>Single</b>	4.0
<b>None</b>	3.9

<sup>†</sup> Nodulation is rated on a scale where 0 = no nodules, 1 = poor nodulation (<5/plant), 2 = fair nodulation (<10/plant), 3 = good nodulation (<20/plant) and 4 = excellent nodulation (>20/plant).

## NDVI Field Image August 14



## Yield by Treatment





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### Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit/ac ††
Single Inoculant	61.1	\$3/ac	-\$3/ac
Untreated	62.0		
Yield Difference	-0.9		
P-Value	0.3503		
CV	3.3%		
Significance	No	Economic	No

† Based on an estimated cost of \$3/ac for liquid inoculant; does not include application cost.

†† Yields were not significantly different, therefore profit/ac decreased by the cost/ac of the single inoculation treatment.