

# Soybean Single Inoculant Trial

**Trial ID: 2021-S1IN02 – R.M. of MacDonald**

**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.

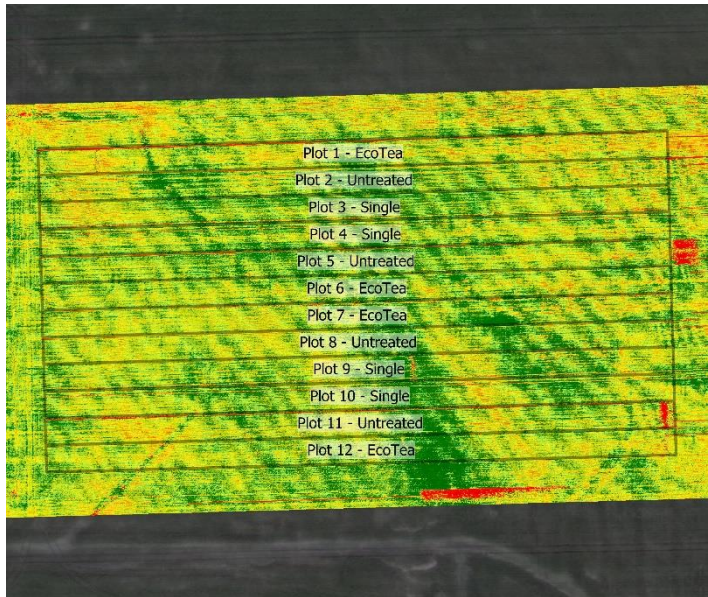
**Summary:** Nodulation was very similar between treatments. There was no significant yield difference between soybeans with and without a single inoculant. EcoTea did not have a significant effect on yield. Due to the lack of yield response, there was a decrease in profit/ac in the inoculated area of the trial, equivalent to the cost of the seed-applied inoculant, and a loss in profit/ac equivalent to the cost of EcoTea application.

## Trial Information

<b>Treatment †</b>	1x Nodulator (liquid) EcoTea™
<b>Last Soybean Crop</b>	2018
<b>Soybean History</b>	3-year history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Oats
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 10
<b>Variety</b>	P006A37X
<b>Seeding Rate</b>	164 000 seeds/ac
<b>Row Spacing</b>	20"
<b>Plant Stand @ V1</b>	130 000 plants/ac
<b>Harvest Date</b>	October 6

† EcoTea™ applied on-seed; intended to help seedling root growth, nutrient use and reduce disease

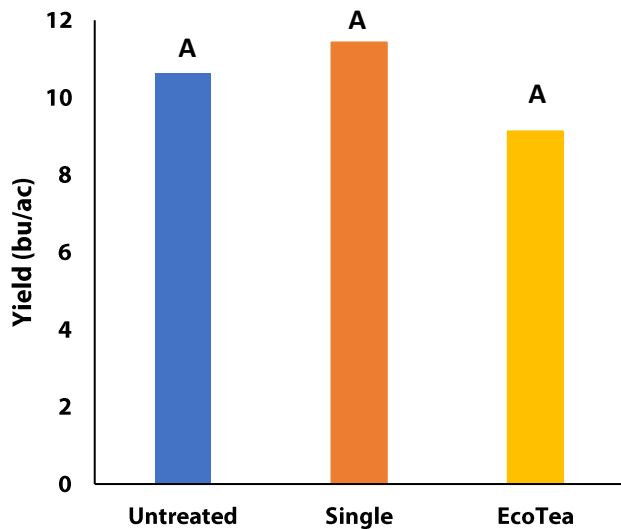
## NDVI Field Image August 14



## Precipitation (mm)

	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	67.5	57	9.2	62.6	196.3
<b>Normal</b>	58.5	92	77.8	67.6	295.9
<b>% Normal</b>	115%	62%	12%	93%	66%

## Yield by Treatment



## Nodulation †

	Average nodulation rating @ R1
<b>Single</b>	2.6
<b>None</b>	2.4
<b>EcoTea</b>	2.6

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



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### Overall Yield & Economics

	Mean (bu/ac)	Cost <sup>†</sup>	Change in Profit/ac <sup>††</sup>
<b>Single Inoculant</b>	11.4	\$3.50/ac	-\$3.50/ac
<b>Untreated</b>	10.6		
<b>EcoTea</b>	9.1	\$7/ac	-\$7/ac
<b>P-Value</b>	0.1312		
<b>CV</b>	15%		
<b>Significance</b>	<b>No</b>	<b>Economic</b>	<b>No</b>

† Based on an estimated cost for on-seed inoculant and biological products

†† 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 the single inoculant as a result.