

# Soybean Single Inoculant Trial

**Trial ID: 2020-S1IN01 – R.M. of De Salaberry**

**Objective:** Quantify the agronomic impacts of seed applied inoculant (single inoculation) vs. no inoculant in soybean fields. This trial normally requires a minimum field history of three previous soybean crops; this field only has a 2-year soybean history.

**Summary:** Despite only have a 2-year soybean history, nodulation was very similar between treatments and 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 Optimize (liquid)
<b>Last Soybean Crop</b>	2016
<b>Soybean History</b>	2-year history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Oats
<b>Tillage</b>	Zero Till
<b>Seeding Date</b>	May 18
<b>Variety</b>	PS 0027 RR
<b>Seeding Rate</b>	411000
<b>Row Spacing</b>	10"
<b>Plant Stand @ V1</b>	98 000
<b>Harvest Date</b>	September 26

† Does not meet soybean history requirement, will not be included in future overall analysis across years as a result

## Precipitation (mm)

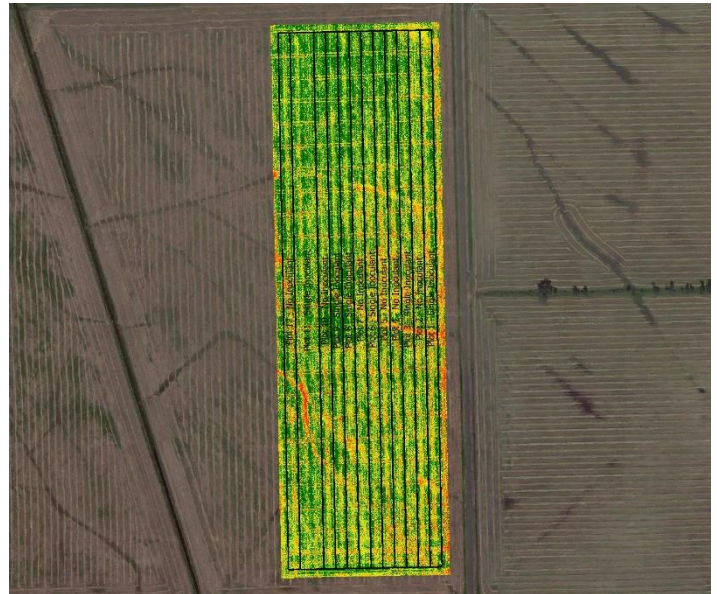
	May	June	July	August
<b>Normal</b>	52.6	94.7	69.5	51.7
<b>Rainfall</b>	14.3	113.5	93.7	68.4

## Nodulation†

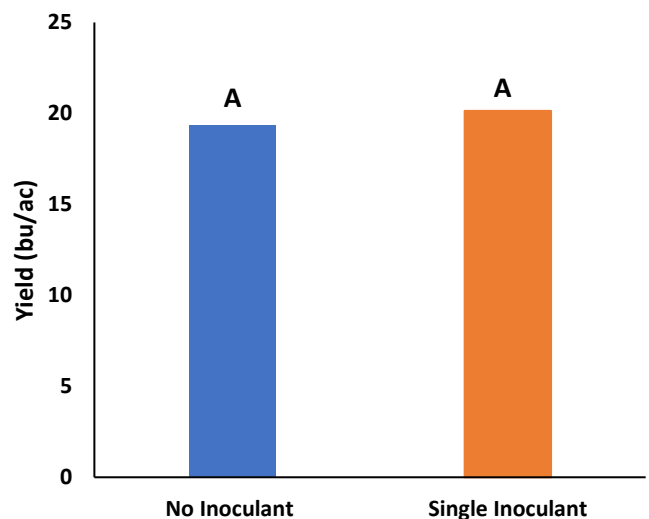
	Average nodulation rating @ R2
<b>Single</b>	3.3
<b>None</b>	3.2

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

## NDVI Field Image August 19



## Yield by Treatment





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### Overall Yield & Economics

	<b>Mean (bu/ac)</b>	<b>Cost †</b>	<b>Change in Profit/ac ††</b>
<b>Single Inoculant</b>	20.1	\$5/ac	-\$5/ac
<b>Untreated</b>	19.4		
<b>Yield Difference</b>	0.7		
<b>P-Value</b>	0.3642		
<b>CV</b>	8.2%		
<b>Significance</b>	<b>No</b>	<b>Economic</b>	<b>No</b>

† 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