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## Soybean Single Inoculant Trial

**Trial ID:** 2023-S1IN02 – R.M. of De Salaberry

**Objective:** Quantify the agronomic 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

<b>Treatment</b>	1x Cell-Tech (liquid)
<b>Last Soybean Crop</b>	2021
<b>Soybean History</b>	5+ year history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Wheat
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 14
<b>Variety</b>	PS 0027 RR
<b>Seeding Rate</b>	195 000 seeds/ac
<b>Row Spacing</b>	10"
<b>Plant Stand @ V2</b>	132 000 plants/ac
<b>Harvest Date</b>	September 20

### NDVI Field Image August 10



### Precipitation (mm)

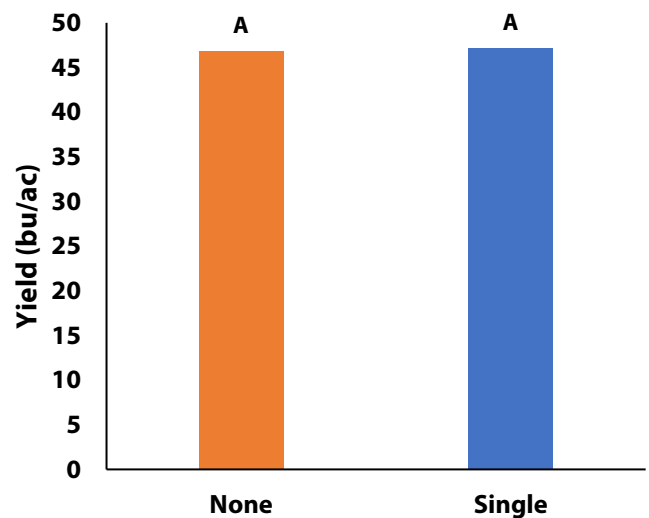
	May	June	July	Aug	Total
<b>Rainfall</b>	19.5	45.9	59	32.5	157
<b>Normal</b>	52.6	94.7	70	51.7	269
<b>% Norm</b>	37%	48%	85%	63%	58%

### Nodulation†

	Average nodulation rating @ R2
<b>Single</b>	3.4 A
<b>None</b>	3.3 A

† 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  $\alpha = 0.05$

### Yield by Treatment





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### Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
Single Inoculant	47.2	\$3/ac	-\$3/ac
Untreated	46.8		
Yield Difference	0.4		
P-Value	0.627		
CV	2.4%		
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