

# Soybean Single Inoculant Trial

**Trial ID:** 2022-S1IN01 – R.M. of Hanover

**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 Nodulator (liquid on-seed)
<b>Last Soybean Crop</b>	2018
<b>Soybean History</b>	4-year history
<b>Soil Texture</b>	Clay
<b>Previous Crop</b>	Canola
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 25
<b>Variety</b>	RX Acron
<b>Seeding Rate</b>	216,500 seeds/ac
<b>Row Spacing</b>	10"
<b>Plant Stand @ V1</b>	172,000 plants/ac
<b>Harvest Date</b>	October 7

## Precipitation (mm)

	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	136.5	77.9	93.9	51.3	359.6
<b>Normal</b>	58.1	91.3	80.1	66.1	295.6
<b>% Normal</b>	235%	85%	117%	78%	122%

## Nodulation (R2)<sup>†</sup>

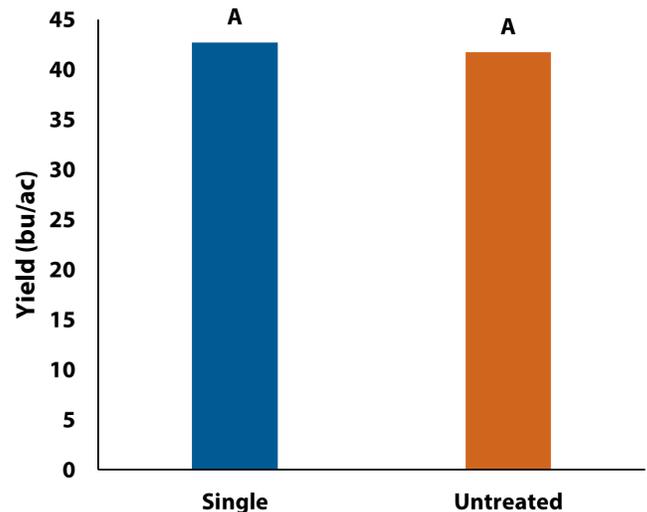
	Average nodulation rating
<b>Single</b>	4.0
<b>None</b>	4.0

<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	42.7	\$3/ac	-\$3ac
Untreated	41.8		
Yield Difference	0.9		
P-Value	0.5381		
CV	5.3%		
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.