

# Soybean Double Inoculant Trial

**Trial ID: 2020-S12N01 – R.M. of Dauphin**

**Objective:** Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. seed applied plus in-furrow inoculant (double inoculation) in soybeans. This trial requires a minimum field history of 2 previous soybean crops.

**Summary:** Nodulation ratings were very similar between treatments. There was no significant yield difference between single and double inoculated soybeans. Due to the lack of yield response, there was a decrease in profit/ac equivalent to the cost difference between single and double inoculation.

## Trial Information

<b>Treatment</b>	1x Optimize (liquid) 5 lbs/ac Cell-Tech (granular)
<b>Last Soybean Crop</b>	2016
<b>Soybean History</b>	2-year history
<b>Soil Texture</b>	Silty Loam
<b>Previous Crop</b>	Ryegrass
<b>Tillage</b>	Zero Till
<b>Seeding Date</b>	May 26
<b>Variety</b>	Amirani R2
<b>Seeding Rate</b>	223 000 seeds/ac
<b>Row Spacing</b>	10"
<b>Plant Stand @ VC</b>	153 000 plants/ac
<b>Harvest Date</b>	September 24

## Precipitation (mm)

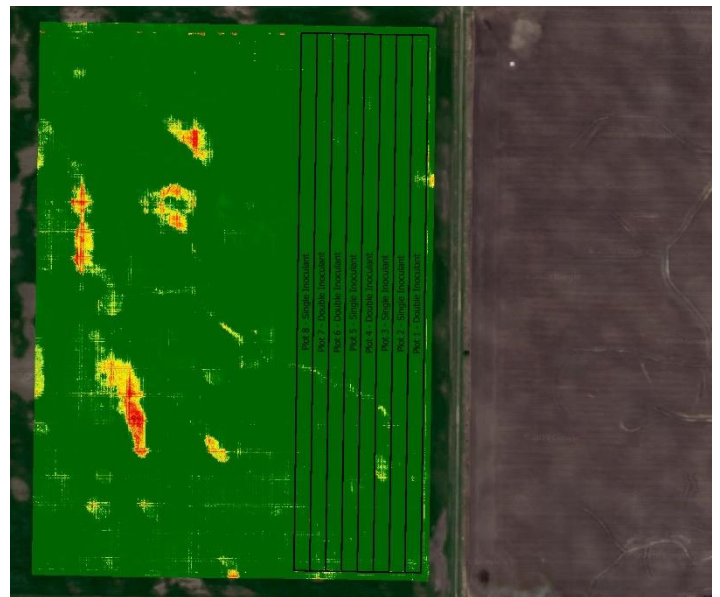
	May	June	July	August
<b>Normal</b>	54.3	86.7	73.2	63.3
<b>Rainfall</b>	31.8	101	67.9	98.4

## Nodulation†

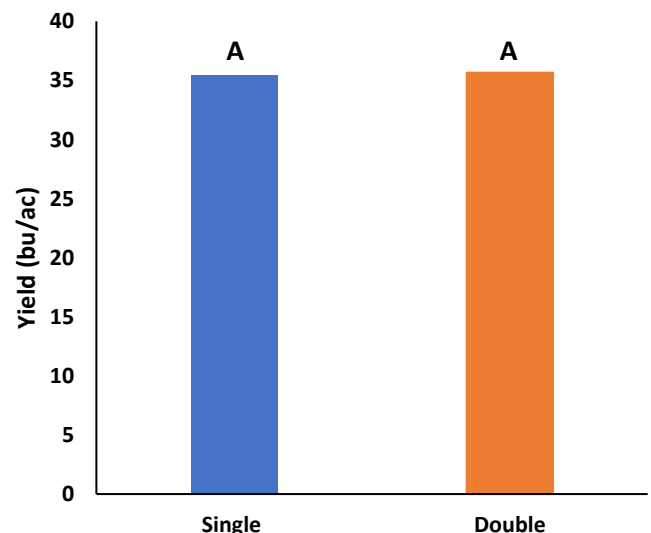
	Average Nodulation Rating @ R2
<b>Double</b>	3.6
<b>Single</b>	3.7

† 0 = no nodules, 1 = Poor (<5/plant), 2 = Fair (<10/plant), 3 = Good (<20/plant), 4 = Excellent (>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 ††
<b>Double Inoculant</b>	35.7	\$15/ac	-\$10/ac
<b>Single Inoculant</b>	35.4	\$5/ac	
<b>Yield Difference</b>	0.3		
<b>P-Value</b>	0.4776		
<b>CV</b>	2.4%		
<b>Significance</b>	<b>No</b>	<b>Economic</b>	<b>No</b>

† Based on an estimated cost for on-seed + granular in-furrow vs. on-seed only

† † Because yields were not significantly different, there is no increased income with the double inoculant to offset the increase in cost/ac