

## Dry Bean Biological Trial

**Trial ID:** 2022-DBB01 – R.M. of Glenboro-South Cypress

**Objective:** Quantify the agronomic and economic impacts of biological products for dry bean production.

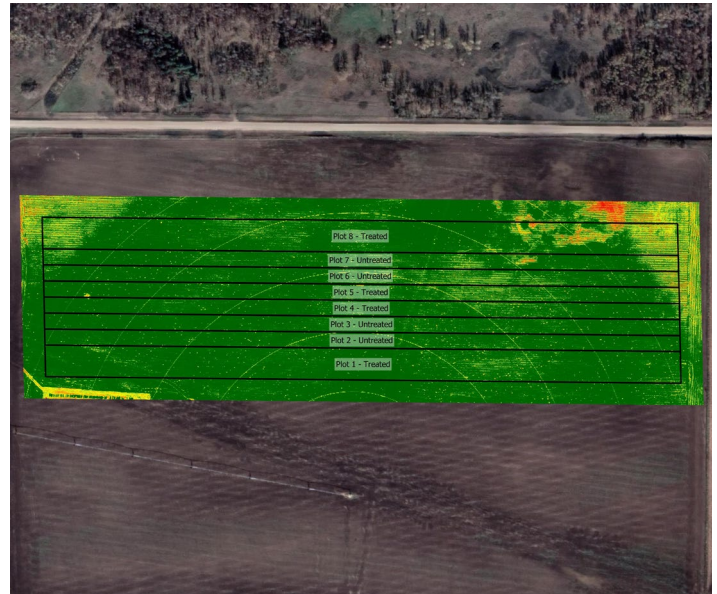
**Summary:** There was no significant yield difference between dry beans treated with Envita® and those without. Due to the lack of yield response, there was a decrease in profit/ac equivalent to the cost of product application.

### Trial Information †

<b>Treatment</b>	Envita®
<b>Application Timing</b>	R2
<b>Application Date</b>	July 15
<b>Application Rate</b>	40 ac/jug
<b>Application Method</b>	Broadcast
<b>Soil Texture</b>	Loamy Fine Sand
<b>Previous Crop</b>	Fall Rye
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 14
<b>Variety</b>	Vibrant Pinto Bean
<b>Seeding Rate</b>	80,000 seeds/ac
<b>Row Spacing</b>	30"
<b>Plant Stand @ R4</b>	65,000 plants/ac
<b>Harvest Date</b>	September 14

† Envita® is a biological product intended to enable plant foliage and roots to fix their own nitrogen.

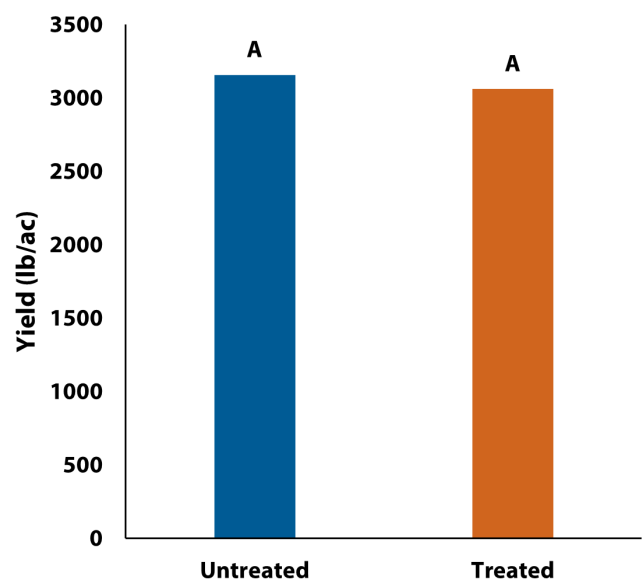
### NDVI Field Image August 3



### Precipitation (mm)

	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	106.2	64.4	151.8	49.5	371.9
<b>Normal</b>	54.4	76.4	75.1	66	271.9
<b>% Normal</b>	195%	84%	202%	75%	137%

### Yield by Treatment





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### Overall Yield & Economics

	Mean (lb/ac)	Cost <sup>†</sup>	Change in Profit/ac <sup>††</sup>
<b>Envita<sup>®</sup></b>	3059.6	\$14.50/ac	-\$14.50/ac
<b>Untreated</b>	3155.6		
<b>Yield Difference</b>	-96		
<b>P-Value</b>	0.3352		
<b>CV</b>	6.5%		
<b>Significance</b>	<b>No</b>	<b>Economic</b>	<b>No</b>

† Based on an estimated cost of \$14.50/ac for biological products; does not include application costs.

†† Yields were not significantly different, therefore profit/ac decreased by the cost/ac of the biological treatment.