# Soybean Double Inoculant Trial

**Trial ID: 2024-S2IN03 – R.M. of Louise**

**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 similar between treatments and agronomically sufficient. There was no significant yield difference between single and double inoculation. Due to the lack of yield response, there was a decrease in profit/ac with double inoculation, equivalent to the cost of the additional inoculant.

## Trial Information

| | |
|---|---|
| **Treatments** | Cell-Tech (liquid) vs Cell-Tech (liquid) + N-Row (Peat/Granular) |
| **Last Soybean Crop** | 2021 |
| **Soybean History** | 4 Year History |
| **Soil Texture** | Clay Loam |
| **Previous Crop** | Barley |
| **Tillage** | Zero Till |
| **Seeding Date** | May 23 |
| **Variety** | Merino R2X |
| **Seeding Rate** | 157,000 seeds/ac |
| **Row Spacing** | 10” |
| **Plant Stand @ V3** | 122,000 plants/ac |
| **Harvest Date** | September 30 |

## Precipitation (mm)

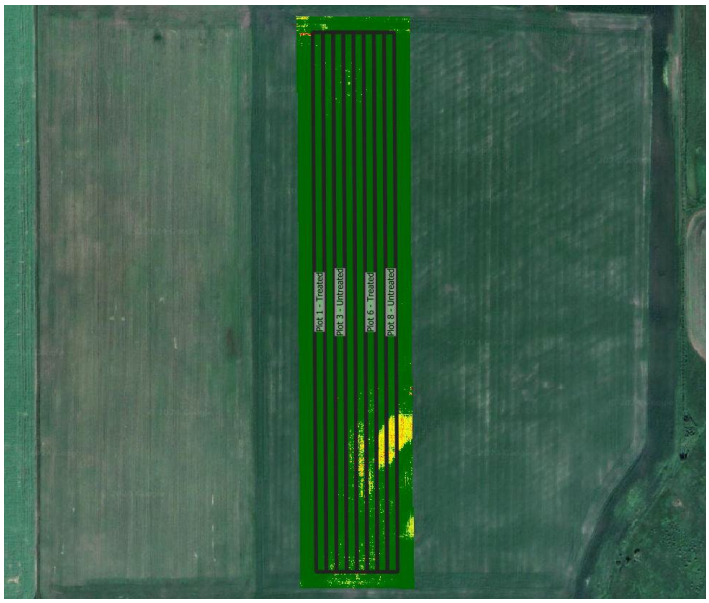
| | May | June | July | Aug | Total |
|---|---|---|---|---|---|
| **Rainfall** | 121.2 | 94.2 | 54.8 | 68.2 | 338.4 |
| **Normal** | 61.1 | 89.8 | 68.3 | 72.3 | 291.5 |
| **% Norm** | 198% | 105% | 80% | 94% | 116% |

## Nodulation ǂ

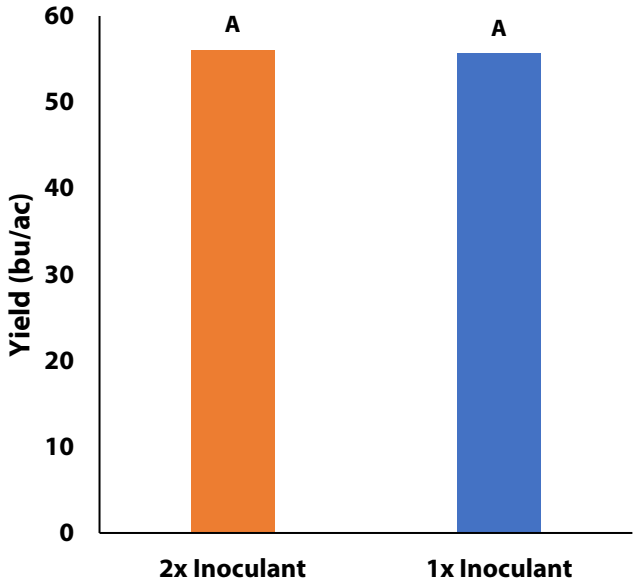
| | Average Nodulation Rating @ R2 |
|---|---|
| **Double** | 3.9 A |
| **Single** | 4.0 A |

**ǂ 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 α =0.05**

## NDVI Field Image August 9




## Yield by Treatment

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## Overall Yield & Economics

| | Mean (bu/ac) | Cost † | Change in Profit †† |
|---|---|---|---|
| **Double Inoculant** | 56 | $13/ac | -$10/ac |
| **Single Inoculant** | 55.6 | $3/ac | |
| **Yield Difference** | 0.4 | | |
| **P-Value** | 0.564 | | |
| **CV** | 1.5% | | |
| **Significance** | **No** | **Economic** | **No** |

**† 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 price**

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