

Soybean Double Inoculant Trial

Trial ID: 2024-S2IN02 – R.M. of Cartwright-Roblin

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 to be included in long-term results.

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 | Nodulator (liquid) vs Nodulator (liquid) + Nodulator Duo SCG (Granular) |
|-------------------|---|
| Last Soybean Crop | 2018 |
| Soybean History | 1 Year (insufficient crop history) |
| Soil Texture | Gravelly Sandy Loam |
| Previous Crop | Wheat |
| Tillage | Zero Till |
| Seeding Date | May 13 |
| Variety | |
| Seeding Rate | 185,000 seeds/ac |
| Row Spacing | 12" |
| Plant Stand @ V3 | 139,000 plants/ac |
| Harvest Date | September 24 |

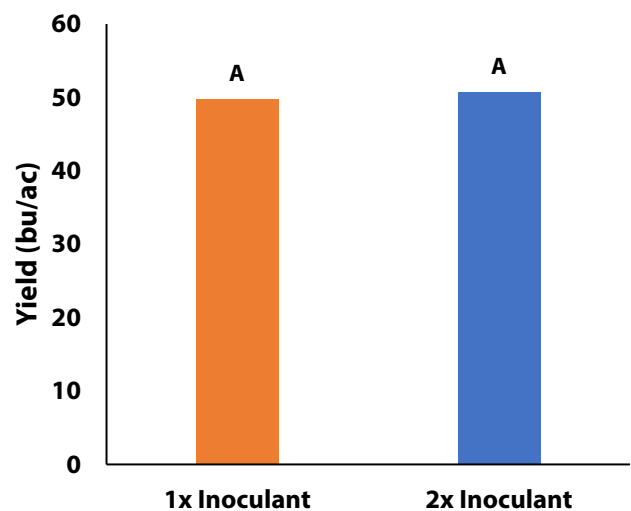
NDVI Field Image August 9



Precipitation (mm)

| | May | June | July | Aug | Total |
|----------|-------|------|------|------|-------|
| Rainfall | 126.3 | 73.9 | 34.5 | 58.3 | 293 |
| Normal | 61.1 | 89.8 | 68.3 | 72.3 | 291.5 |
| % Norm | 207% | 82% | 51% | 81% | 101% |

Yield by Treatment



Nodulation †

| | Average Nodulation Rating @ R2 |
|--------|--------------------------------|
| Double | 3.9 A |
| Single | 4.0 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 $\alpha = 0.05$



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Overall Yield & Economics

| | Mean (bu/ac) | Cost † | Change in Profit †† |
|-------------------------|--------------|-----------------|---------------------|
| Double Inoculant | 50.7 | \$13/ac | -\$10/ac |
| Single Inoculant | 49.8 | \$3/ac | |
| Yield Difference | 0.9 | | |
| P-Value | 0.176 | | |
| 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