

Soybean Double Inoculant Trial

Trial ID: 2023-S2IN01 – R.M. of De Salaberry

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	1x Lalfix Liquid Soybean (on-seed) vs 1x Lalfix Liquid Soybean (on-seed) + 5lbs/ac Nodulator (granular)
Last Soybean Crop	2019
Soybean History	5+ year history
Soil Texture	Clay
Previous Crop	Wheat
Tillage	Conventional
Seeding Date	May 14
Variety	S007-A2XS
Seeding Rate	170 000 seeds/ac
Row Spacing	20"
Plant Stand @ V2	162 000 plants/ac
Harvest Date	September 20

Precipitation (mm)

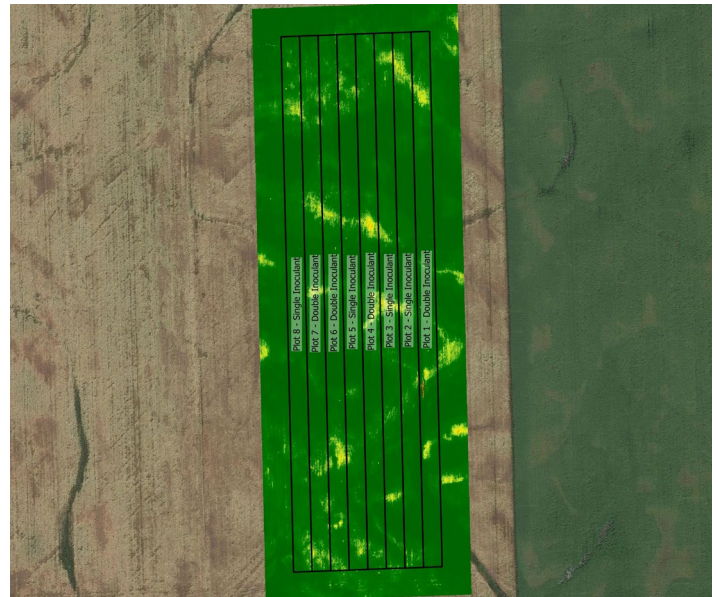
	May	June	July	Aug	Total
Rainfall	19.5	45.9	59	32.5	157
Normal	52.6	94.7	70	51.7	269
% Norm	37%	48%	85%	63%	58%

Nodulation †

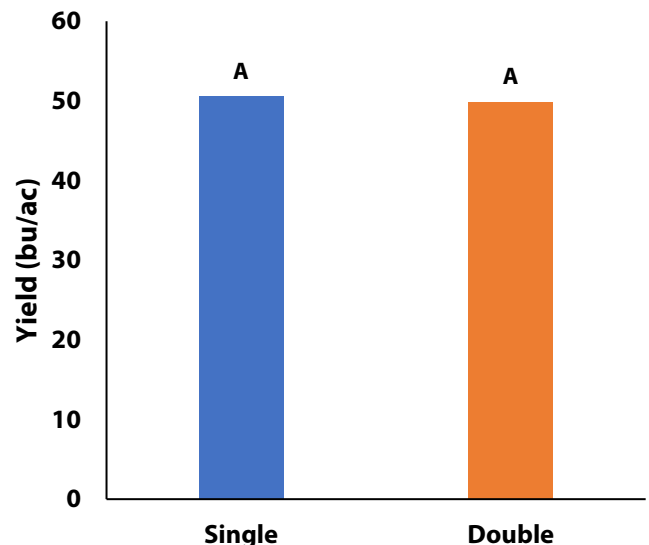
	Average Nodulation Rating @ R2
Double	3.5 A
Single	3.6 A

† 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 $\alpha = 0.05$

NDVI Field Image August 10



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit ††
Double Inoculant	49.9	\$13/ac	-\$10/ac
Single Inoculant	50.5	\$3/ac	
Yield Difference	-0.6		
P-Value	0.532		
CV	2.6%		
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