

Soybean Double Inoculant Trial

Trial ID: 2021-S2IN03 – R.M. of Wallace-Woodworth

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 and agronomically sufficient. 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 in the double inoculated area of the trial, equivalent to the cost of the in-furrow inoculant application.

Trial Information

Treatment	1x AGTIV® SOYBEAN • Powder (on-seed) 5 lbs/ac AGTIV® SOYBEAN • Granular
Last Soybean Crop	2018
Soybean History	3-year history
Soil Texture	Clay Loam
Previous Crop	Wheat
Tillage	Conventional
Seeding Date	May 13
Variety	P005A83X
Seeding Rate	194 500 seeds/ac
Row Spacing	12"
Plant Stand @ V2	158 000 plants/ac
Harvest Date	September 23

Precipitation (mm)

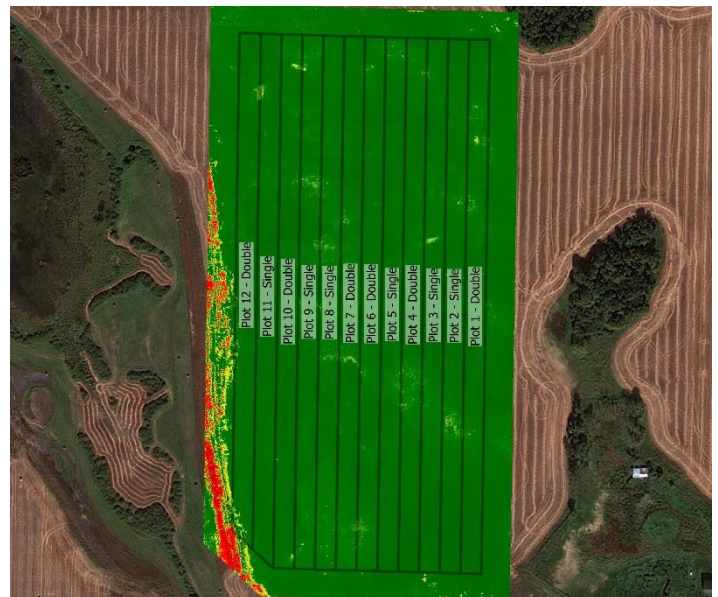
	May	Jun	Jul	Aug	Total
Rainfall	34.2	83.8	22.9	130	270.5
Normal	51.2	72.8	74.4	67.5	265.9
% Normal	67%	115%	31%	192%	102%

Nodulation†

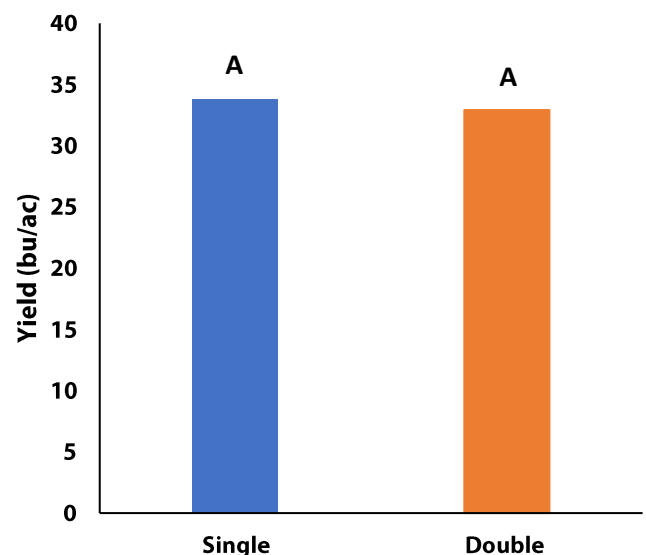
	Average Nodulation Rating @ R2
Double	4.0
Single	4.0

† 0 = no nodules, 1 = Poor (<5/plant), 2 = Fair (<10/plant), 3 = Good (<20/plant), 4 = Excellent (>20/plant)

NDVI Field Image August 13



Yield by Treatment





on-farm network
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Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
Double Inoculant	32.9	\$13.50/ac	-\$10/ac
Single Inoculant	33.8	\$3.50/ac	
Yield Difference	-0.9		
P-Value	0.6594		
CV	8.9%		
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. Profit/ac declines by the increased cost as a result.