

Soybean Double Inoculant Trial

Trial ID: 2022-S2IN03 – R.M. of Dauphin

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. 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 Signum (liquid on-seed) 5 lbs/ac Nodulator (granular)
Last Soybean Crop	2019
Soybean History	> 3 years
Soil Texture	Loamy Fine Sand
Previous Crop	Canola
Tillage	Conventional
Seeding Date	June 04
Variety	S0009-M2
Seeding Rate	195,000 seeds/ac
Row Spacing	10"
Plant Stand @ VC	168,000 plants/ac
Harvest Date	October 3

Precipitation (mm)

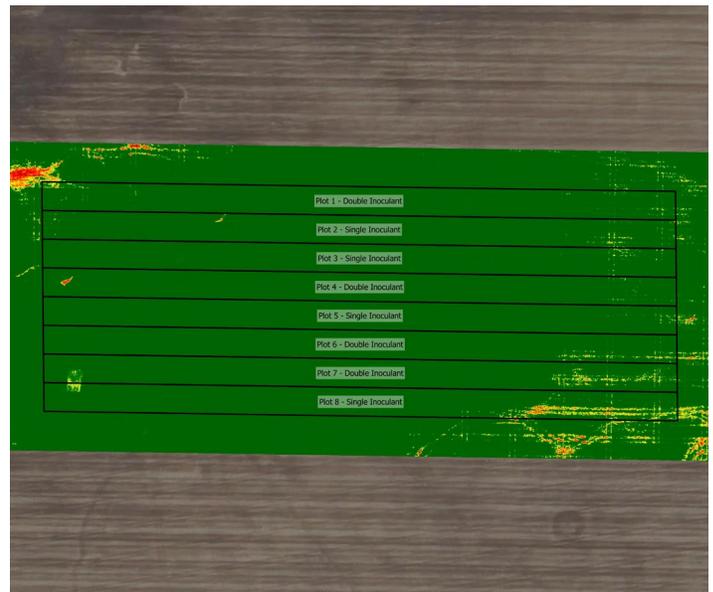
	May	Jun	Jul	Aug	Total
Rainfall	129.6	74.6	75.5	39.5	319.2
Normal	54.3	86.7	73.2	63.3	277.5
% Normal	239%	86%	103%	62%	115%

Nodulation (R2) †

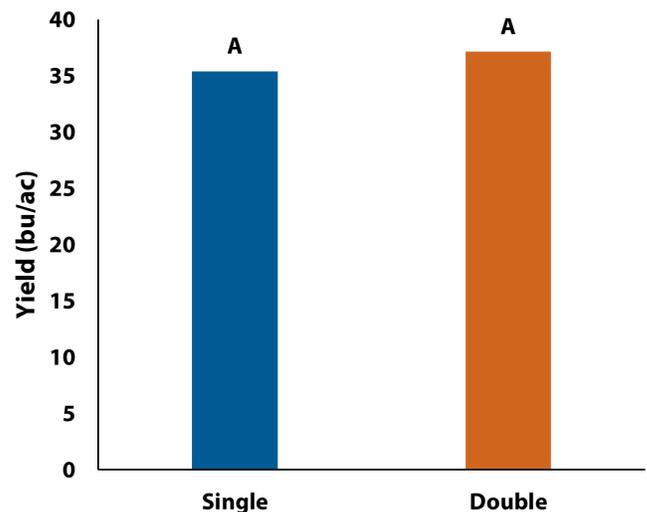
	Average Nodulation Rating
Double	4.0
Single	4.0

† Nodulation is rated on a scale where 0 = no nodules, 1 = poor nodulation (<5/plant), 2 = fair nodulation (<10/plant), 3 = good nodulation (<20/plant) and 4 = excellent nodulation (>20/plant).

NDVI Field Image August 11



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
Double Inoculant	37.1	\$13/ac	-\$10/ac
Single Inoculant	35.4	\$3/ac	
Yield Difference	1.7		
P-Value	0.2973		
CV	9.2%		
Significance	No	Economic	No

[†] Based on an estimated cost of \$3/ac for liquid inoculant and \$10/ac for granular inoculant; does not include application cost.

^{††} Yields were not significantly different, therefore profit/ac decreased by the cost/ac of the double inoculation treatment.