

Soybean Double Inoculant Trial

Trial ID: 2021-S2IN01 – 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 and indicated agronomically sufficient nodulation. 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 Soybean (on-seed) 5 lbs/ac Nodulator (granular)
Last Soybean Crop	2018
Soybean History	2-year history
Soil Texture	Loam
Previous Crop	Canola
Tillage	Conventional
Seeding Date	May 11
Variety	Amirani R2
Seeding Rate	200 000 seeds/ac
Row Spacing	10"
Plant Stand @ V2	140 000 plants/ac
Harvest Date	September 11

Precipitation (mm)

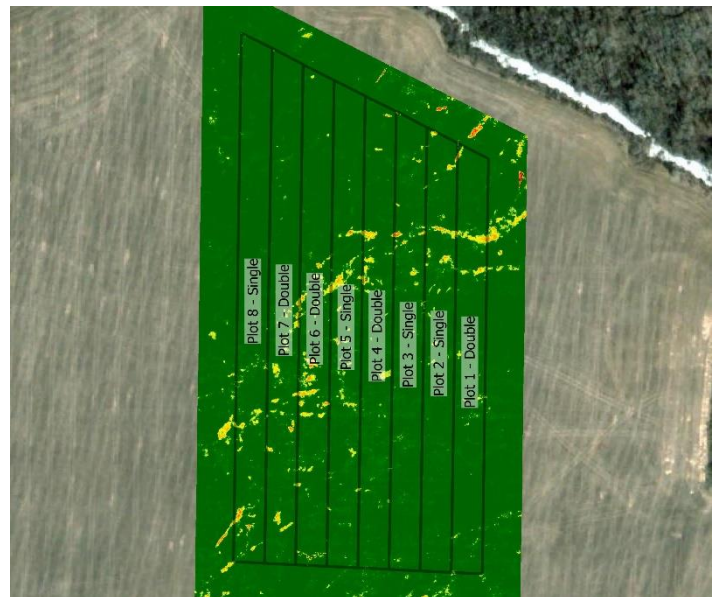
	May	Jun	Jul	Aug	Total
Rainfall	23.9	70.9	30.3	89.5	214.6
Normal	54.3	86.7	73.2	63.3	277.5
% Normal	44%	82%	41%	141%	77%

Nodulation†

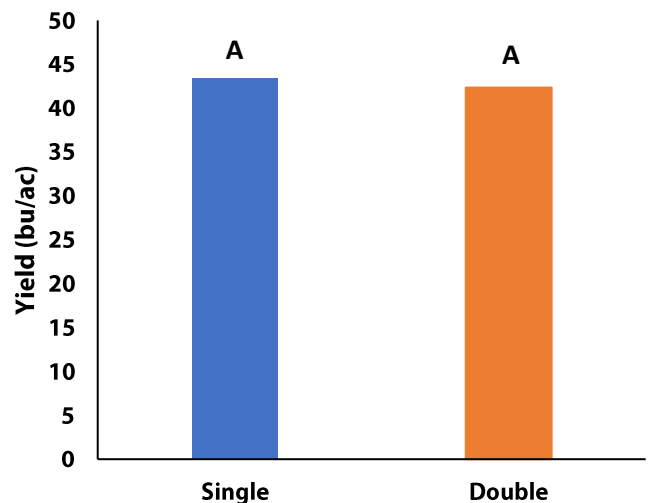
	Average Nodulation Rating @ R1
Double	3.4
Single	3.3

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

NDVI Field Image August 17



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost[†]	Change in Profit/ac^{††}
Double Inoculant	42.3	\$13.50	-\$10/ac
Single Inoculant	43.4	\$3.50	
Yield Difference	-1.1		
P-Value	0.2095		
CV	2.3%		
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.