

Soybean Double Inoculant Trial

Trial ID: 2020-S2IN04 – R.M. of Grassland

Objective: Quantify the agronomic and economic impacts of seed applied inoculant (single inoculation) vs. seed applied plus in-furrow inoculant (double inoculation) in soybean fields. This trial requires a minimum field history of 2 previous soybean crops.

Summary: Nodulation ratings were the same 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 equivalent to the cost of the in-furrow inoculant application.

Trial Information

Treatment	1x Cell-Tech (liquid) 6 lbs/ac Cell-Tech (granular)
Last Soybean Crop	2018
Soybean History	2-year history
Soil Texture	Loam
Previous Crop	Wheat
Tillage	Zero Till
Seeding Date	May 30
Variety	Merritt R2X
Seeding Rate	181 000 seeds/ac
Row Spacing	12"
Plant Stand @ VC	161 000 plants/ac
Harvest Date	September 25

Precipitation (mm)

	May	June	July	August
Normal	46.9	83.7	65.2	57.6
Rainfall	19.2	199.3	51.1	23.9

Nodulation†

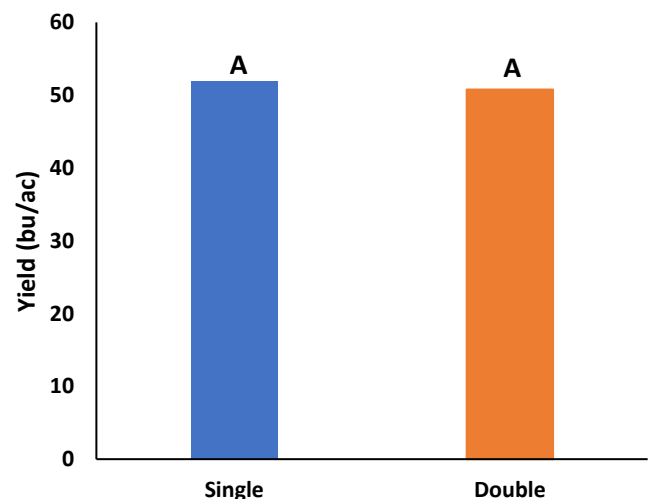
	Average nodulation rating @ R2
Double	3.9
Single	3.9

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

NDVI Field Image August 21



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit/ac ††
Double Inoculant	50.8	\$15/ac	-\$10/ac
Single Inoculant	51.9	\$5/ac	
Yield Difference	-1.1		
P-Value	0.3429		
CV	3.0%		
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 cost/ac