

Dry Bean Inoculant Trial

Trial ID: 2025-DB1IN04 – R.M. of Boissevain – Morton

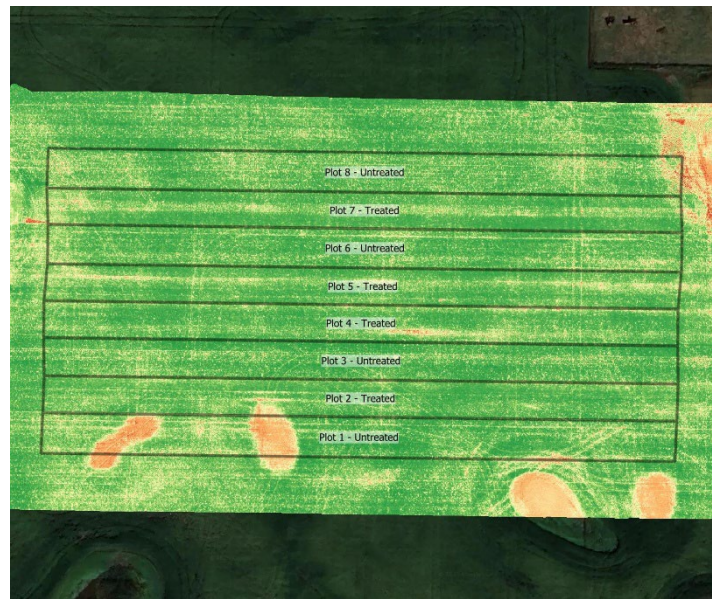
Objective: Quantify the agronomic and economic impacts of a single inoculant product vs. no inoculation in dry beans.

Summary: There were significantly more nodules per plant in the LEGUMFiX® treatment compared to those without. Average plant tissue nitrogen (%) content and fall nitrate (0-24") were similar between treatments. There was no significant yield difference between dry beans with LEGUMFiX® with no added nitrogen (N) compared to untreated dry beans with added N. Due to the lack of yield response, there was a decrease in profit/ac in the treated area of the trial, equivalent to the cost of the inoculant or fertilizer.

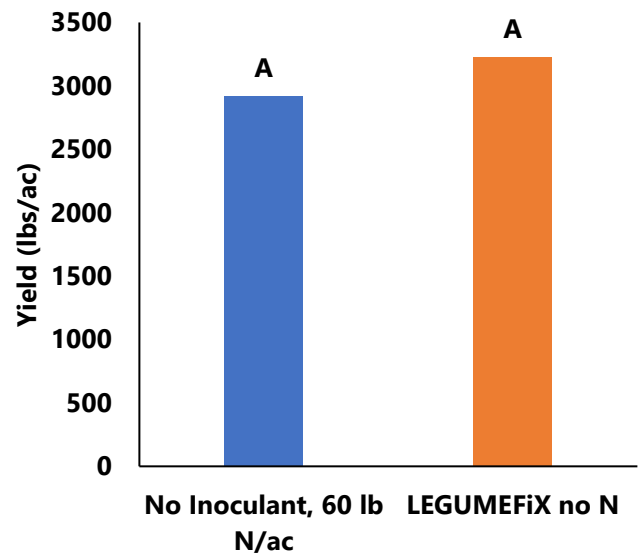
Trial Information†

Treatments	No inoculant (60 lbs N) vs. 4g LEGUMFiX®/kg seed
Years Since Dry Beans	Never
Soil Texture	Loamy Clay Loam
Previous Crop	Wheat
Tillage	Minimum Tillage
Seeding Date	6/5/2025
Variety	Black Bean CDC Blackstrap
Seeding Rate	150,000 seeds/ac
Row Spacing	10 in.
Plant Stand @ V6	112,438 plants/ac
Spring Soil Test N (0-24")	30 lbs/ac (estimate only)
Harvest Date	9/30/2025

NDVI Field Image July 17



Yield by Treatment



Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	68.6	#N/A	83.3	#N/A	#N/A
Normal	59	#N/A	61.12	#N/A	#N/A
% Norm	116%	#N/A	136%	#N/A	#N/A

Nodulation

	Average Total Nodule Number Per Plant at R2†
Untreated (with N)	2 B
LEGUMFiX (no N)	10 A

† Averages followed by different letters are significantly different at $\alpha = 0.05$

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Plant Tissue N @ R2

	Average Total N [†]	AGVISE Interpretation
Untreated (with N)	4.0 % A	Sufficient
LEGUMEFiX (no N)	3.7 % A	Sufficient

[†] Averages followed by different letters are significantly different at $\alpha = 0.05$

Fall Soil Test N

	Fall Soil Nitrate 0-24" [†]
Untreated (with N)	33 lbs/ac A
LEGUMEFiX (no N)	39 lbs/ac A

[†] Averages followed by different letters are significantly different at $\alpha = 0.05$

Overall Yield & Economics

	Mean (lbs/ac)	Cost [†]	Change in Profit ^{††}
Untreated (with N)	2921.1	\$51.60/ac	-\$51.60/ac
LEGUMEFiX (no N)	3228.7	\$4.30/ac	-\$4.30/ac
P-Value	0.0514		
CV	8%		
Significance	No	Economic	No

[†] Based on an estimated cost for in-furrow inoculant and fertilizer (\$0.86/lb of actual N)

^{††} Because yields were not significantly different, there was no increased income to offset the cost of the treatments.



Visible treatment differences were observed on July 17 at V8 stage. Dry beans treated with nitrogen (picture left) appeared darker green than the inoculated dry beans without a nitrogen application which were less green (right). By August 1, at R2, the treatment differences were no longer visible with little visible disease symptoms.