



Corn Nitrogen Fixing Biological Products

Trial ID: 2023-CRNB04 — R.M. of Rockwood

Objective: The purpose of this project is to quantify the agronomic and economic impacts of a biological nitrogen fixing product on grain corn for yield and grain quality

Summary: There was no significant yield difference between the treatments. As a result, there was a decrease in profit equivalent to the increase in the use of Envita in addition to the regular fertilizer input.

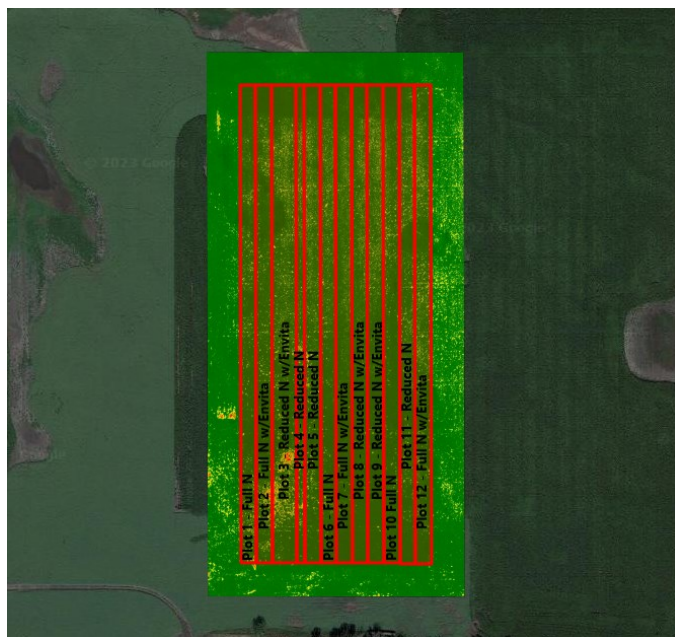
Trial Information

Product	Envita
Soil Properties (0-6")	65N 26P 563K
Soil Texture	Clay Loams
Fertilizer Application	147N (Full N) 117N (Reduced N) 19P 10S
Previous Crop	Corn
Tillage	Conventional Tillage
Planting Equipment	47' Air Drill
Planting Date	May 15
Planting Rate	34,000 seeds/ac
Variety	P7389AM
Row Spacing	10"
Harvest Date	October 21

Corn Response

	Plants/ac	Moisture (%)
Full N	27,500	18.5
Reduced N	27,333	17.6
Full N w/Envita	29,167	17.7
Reduced N w/Envita	28,167	18.0

NDVI Imagery August 13



Precipitation[†] (mm)

	May	June	July	Aug	Total
Rainfall	12	55	38	48	153
Normal	56	92	82	75	305
% Normal	21%	59%	47%	65%	50%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac
Full N	109.5	\$0/ac	
Reduced N	106.3	\$0/ac	
Full N w/Envita	105.0	\$14.50/ac	- \$14.50/ac
Reduced N w/Envita	104.9	\$14.50/ac	- \$14.50/ac
P-Value	0.2100	Economics: Because yields were not significantly different, there is no increased income to offset the increase in price. Profit per acre declines by the cost of the biological product used.	
CV	2.46%		
Significance	No		

[†]Estimated cost; represents product only.



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