



Corn Nitrogen Fixing Biological Products

Trial ID: 2023-CRNB05 — R.M. of Springfield

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 a significant yield difference between the treatments. As a result, there was an increase in profit in the Full N treatment compared to the Reduced N treatment.

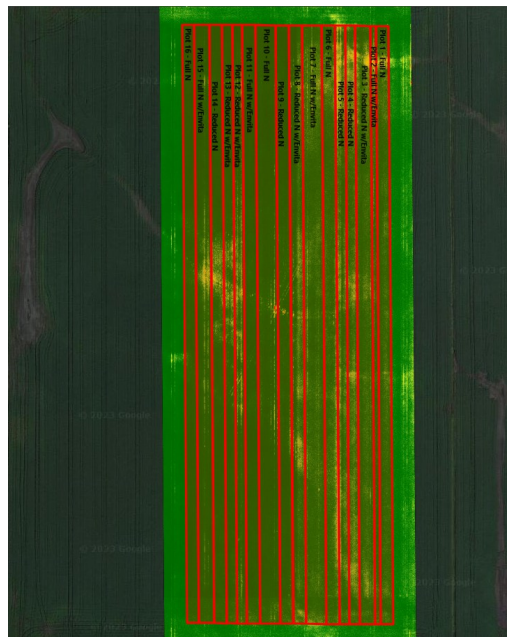
Trial Information

Product	Envita
Soil Properties (0-6")	270N 86P 533K
Soil Texture	Clay
Fertilizer Application	100N (Reduced N), 150N (Full N)
Previous Crop	Soybeans
Tillage	Conventional Tillage
Planting Equipment	60' Planter
Planting Date	May 12
Planting Rate	36,000 seeds/ac
Variety	NS 276
Row Spacing	15"
Harvest Date	November 04

Corn Response

	Plants/ac	Moisture (%)
Full N	35,333	20.5
Reduced N	35,833	20.5
Full N w/Envita	36,000	20.8
Reduced N w/Envita	34,916	20.5

NDVI Imagery August 14



Precipitation[†] (mm)

	May	June	July	Aug	Total
Rainfall	8	58	69	70	205
Normal	58	88	87	76	309
% Normal	14%	67%	79%	91%	66%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac
Full N	175.5 ^A	\$45.35/ac	+ \$39.60/ac
Reduced N	161.8 ^{BC}	\$0/ac	- \$84.94/ac
Full N w/Envita	169.9 ^{AB}	\$59.85/ac	- \$14.50/ac
Reduced N w/Envita	154.5 ^C	\$14.50/ac	- \$99.44/ac
P-Value	0.0152	Economics: Yields were significantly different between the treatments. The Full N treatment was the most profitable based on product costs and current grain prices.	
CV	4.53%		
Significance	Yes		

[†]Cost of UAN (28-0-0) used in June 2023 was estimated at \$560/tonne. Cost of Envita is \$14.50/acre. Price of corn (Nov 2023) at \$6.20/bushel



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