Corn Nitrogen Fixing Biological Products

Trial ID: 2023-CRNB01 — R.M. of De Salaberry

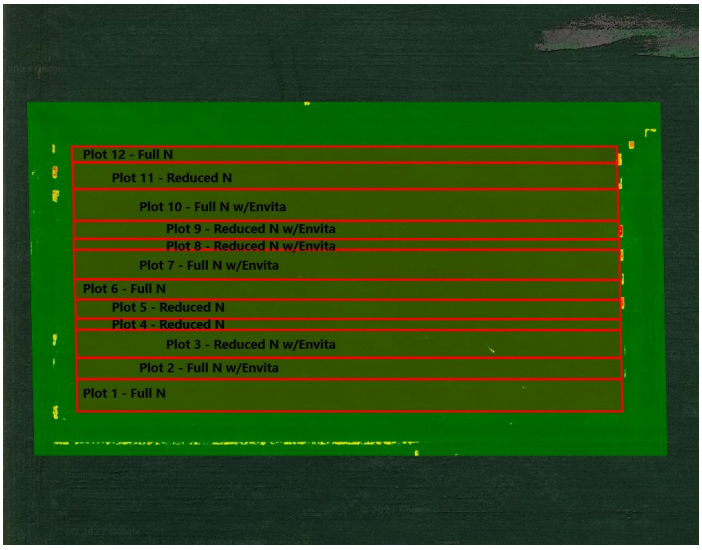
Objective: The purpose of this project is to quantify the agronomic and economic impacts of a biological nitrogen fixing product on grain corn for yield and grain quality

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")	21N 13P 301K
Soil Texture	Clay
Fertilizer Application	140N (Full N) 110N (Reduced N) 40P
Previous Crop	Soybeans
Tillage	Conventional Tillage
Planting Equipment	22' Planter
Planting Date	May 04
Planting Rate	34,000 seeds/ac
Variety	P75827AM
Row Spacing	22"
Harvest Date	October 11

NDVI Imagery August 10



Corn Response

	Plants/ac	Moisture (%)
Full N	31,667	18.7
Reduced N	33,667	18.8
Full N w/Envita	33,000	19.2
Reduced N w/Envita	33,333	19.0

Precipitation† (mm)

	May	June	July	Aug	Total
Rainfall	9	56	59	33	**157**
Normal	69	100	93	74	**336**
% Normal	13%	56%	63%	44%	**47%**

†Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost†	Change in Profit/ac
Full N	127.4	$0/ac	
Reduced N	126.8	$0/ac	
Full N w/Envita	128.3	$14.50/ac	- $14.50/ac
Reduced N w/Envita	126.7	$14.50/ac	- $14.50/ac
P-Value	0.6243	**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	1.25%		
Significance	**No**		

†Estimated cost; represents product only.

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MANITOBA CROP ALLIANCE
Phone: 204-745-6661
Website: mbcropalliance.ca
Email: hello@mbcropalliance.ca