Corn Nitrogen Fixing Biological Products

Trial ID: 2023-CRNB02 — R.M. of North Norfolk

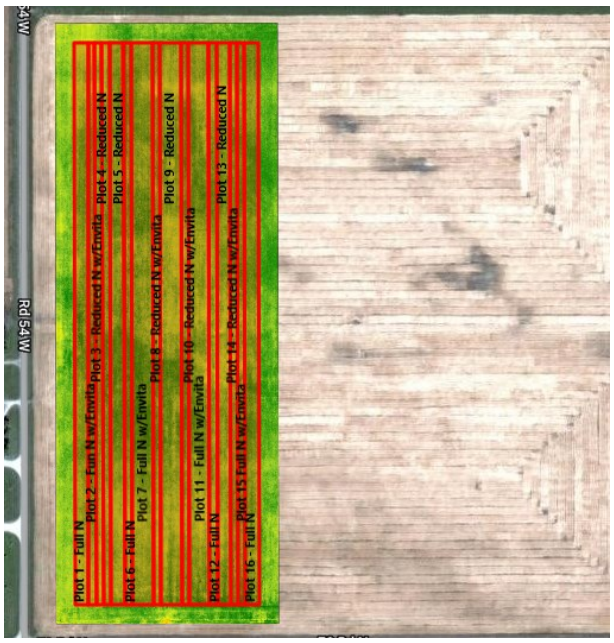
Objective: The purpose of this project is to quantify the agronomic and economic impacts of a biological nitrogen fixing product on grain corn for yield and grain quality

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")	14N 16P 219K
Soil Texture	Course Loams
Fertilizer Application	130N (Full N) 100N (Reduced N) 30P 5S
Previous Crop	Wheat
Tillage	Conventional Tillage
Planting Equipment	60' Planter
Planting Date	May 09
Planting Rate	32,000 seeds/ac
Variety	P7389AM
Row Spacing	30"
Harvest Date	October 18

NDVI Imagery August 09



Corn Response

	Plants/ac	Moisture (%)
Full N	31,500	16.8
Reduced N	31,375	16.9
Full N w/Envita	31,875	16.7
Reduced N w/Envita	31,000	17.0

Precipitation† (mm)

	May	June	July	Aug	Total
Rainfall	25	65	14	33	**137**
Normal	62	89	78	66	**295**
% Normal	40%	73%	18%	50%	**46%**

†Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost†	Change in Profit/ac
Full N	166.8	$0/ac	
Reduced N	167.0	$0/ac	
Full N w/Envita	164.1	$14.50/ac	- $14.50/ac
Reduced N w/Envita	163.0	$14.50/ac	- $14.50/ac
P-Value	0.6921	**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	3.45%		
Significance	**No**		

†Estimated cost; represents product only.

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