MinnesotaCorn
RESEARCH & PROMOTION COUNCIL

INNOVATION GRANT FINAL REPORT

PROJECT TITLE: Nitrogen VRN
REPORTING PERIOD: Final Report and Invoice due by Feb 28, 2018
FARMER INNOVATOR: Les Anderson
COLLABORATING ORGANIZATION/PERSON:
PHONE NUMBER:
EMAIL:

1.) PROJECT ACTIVITIES COMPLETED DURING THE REPORTING PERIOD. (*Describe project progress specific to goals, objectives, and deliverables identified in your project proposal.*)

Plot was harvested, Yield data was collected and analyzed

2.) IDENTIFY ANY SIGNIFICANT FINDINGS AND RESULTS OF THE PROJECT. (*This could include photo documentation of the project at various stages if you haven't already provided these as well as final relevant images of the project at completion. Any data analysis (especially Level 3 Grants), graphics or record of observations throughout the growing season or during the field day event are also anticipated.)*

As expected, the program that called for the most nitrogen had the highest yield, the one with the least had the lowest yield, and the flat rate had the highest net return per acre.

3.) CHALLENGES ENCOUNTERED. (*Describe any challenges that you encountered related to project progress specific to goals, objectives, and deliverables identified in the project proposal.*)

The biggest challenge was the weather itself. Nice Spring gave way to a dry summer and some winds, long cold harvest. The final yield was negatively affected by the weather

4.) EDUCATION AND OUTREACH ACTIVITES. *(Describe any opportunities to engage with farmers, influencers or the media about your project.)*

5.) HOW CAN WE HELP? *(Please let us know how we can improve the experience for the next generation of projects.)*

Authentisign
Les M Anderson
2/1/2019 9:29:32 AM CST

Bob Flat	Adapt N	Climate	Flat Rate N	Nitrate Grid Samples
Yield (Bu/A)	220.5	230.3	228.4	213.4
Primary Soil Test Attributes				
Average pH	6.2	6.4	6.1	6.3
Average P	28.4	21.5	32.1	26.4
Average K	151	136.3	156.2	144.7
Average OM	2.8	2.4	2.9	2.6
Average CEC	12.5	11.9	12.7	12.1
Applied N Per Acre				
Spring Applied #N/Acre	86	86	86	86
Sidedressed #N/Acre	69.3	104.8	78.6	37.3
Total Applied #N/Acre	155.3	190.8	164.6	123.3
#N/Bu	0.70	0.83	0.72	0.58
Economics				
Corn price	$ 3.60	$ 3.60	$ 3.60	$ 3.60
Gross $/Acre	$ 793.80	$ 829.08	$ 822.24	$ 768.24
Sidedress N $/Acre	$ 28.90	$ 43.70	$ 32.78	$ 15.55
Nitrogen Program Cost $/Acre	$ 3.40	$ 3.00	$ -	$ 6.50
Net $/Acre	$ 761.50	$ 782.38	$ 789.46	$ 746.19
Glen Flat	**Adapt N**	**Climate**	**Flat Rate N**	**Nitrate Grid Samples**
Yield (Bu/A)	218.5	221.6	220.5	217
Primary Soil Test Attributes				
Average pH	6.3	6.6	6.3	6.6
Average P	39.3	40.1	39.9	40.8
Average K	212.7	199.1	216	204.2
Average OM	2.5	2.3	2.5	2.3
Average CEC	11.3	10.6	11.3	10.7
Applied N Per Acre				
Spring Applied #N/Acre	86	86	86	86
Sidedressed #N/Acre	70.9	104.8	78.6	72.5
Total Applied #N/Acre	156.9	190.8	164.6	158.5
#N/Bu	0.72	0.86	0.75	0.73
Economics				
Corn price	$ 3.60	$ 3.60	$ 3.60	$ 3.60
Gross $/Acre	$ 786.60	$ 797.76	$ 793.80	$ 781.20
Sidedress N $/Acre	$ 29.57	$ 43.70	$ 32.78	$ 30.23
Nitrogen Program Cost $/Acre	$ 3.40	$ 3.00	$ -	$ 6.50
Net $/Acre	$ 753.63	$ 751.06	$ 761.02	$ 744.47
Ave.Yield/Acre (Both Trials)	219.5	225.95	224.45	215.2
Ave. Net $/Acre(Both Trials)	$ 757.57	$ 766.72	$ 775.24	$ 745.33

80# Nitrogen was applied preplant, along with 6# of Nitrogen from the starter. The sidedress was based on a variable rate technology. The Variable rate technologies included were Adapt N, Climate, and Nitrate Grid Sampling from Ag Partners and compared to a flat rate of 80# of Nitrogen that was a mixture of urea and AMS. The as applied rate was used in the analysis to ensure the most accurate Nitrogen application rates. Yield was measured with the combine yield monitor and analyzed by Premier Crop in Des Moines, IA. The headlands and approximately 100' of each row were eliminated from the treatment to ensure the most accurate yield and sidedress applications were used.