
FRIENDLY
4H CLUB
CONSERVATION FARM
FAMILY OF THE YEAR
2022
The
Isermann Family
LaSalle County Soil & Water
Conservation District

Isermann FARMS

2017 Illinois Beef Association
Environmental Steward of the Year

What are we trying to do?

- Stop Erosion
- Stop N and P loss
- Increase soil health
- Increase “sustainability”
- Financial stability
- Environmental footprint
- Climate resiliency
- Adding livestock to the mix

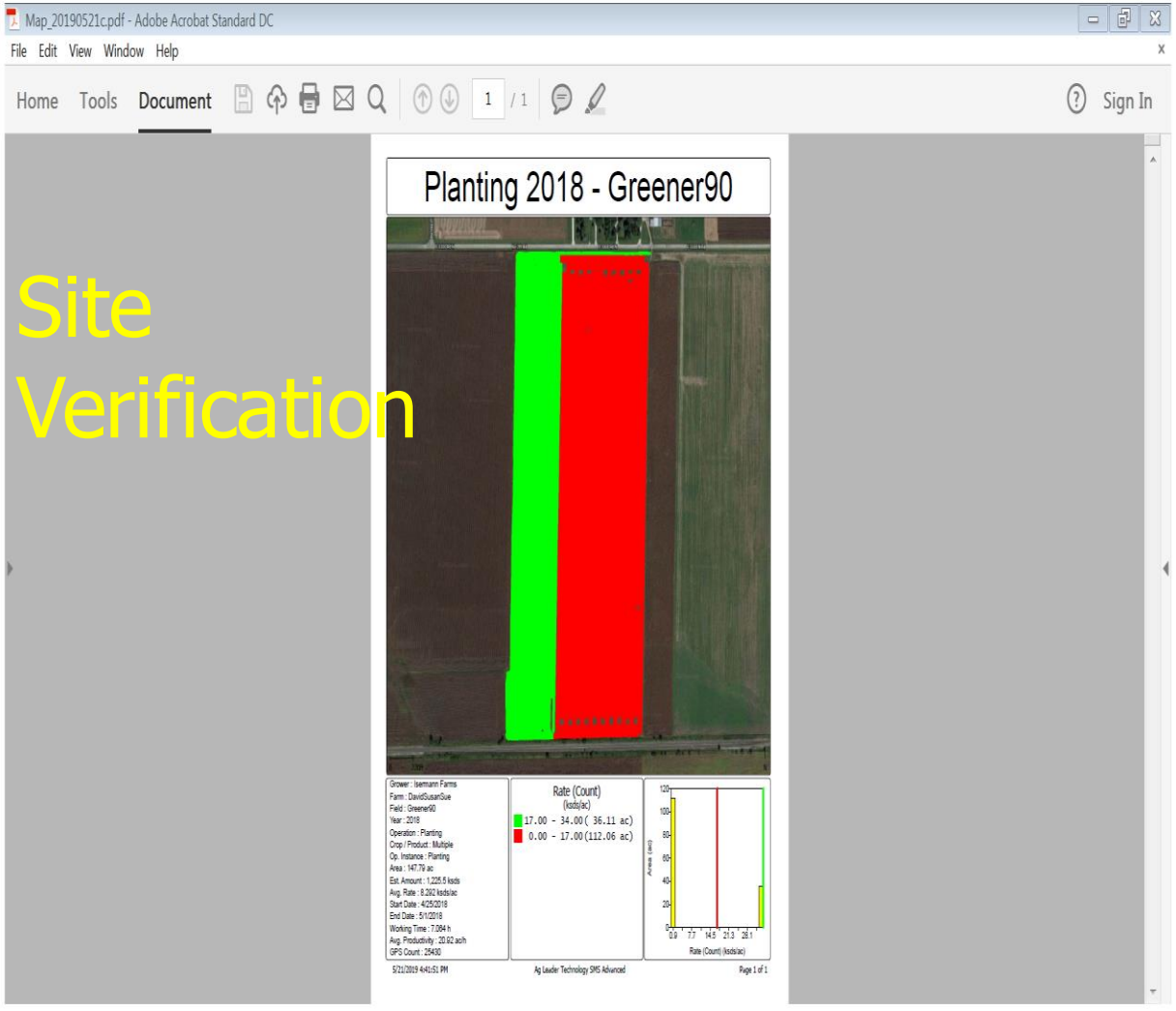
Isermann Farms Conservation Practices


N & P Management
How we accomplish this.

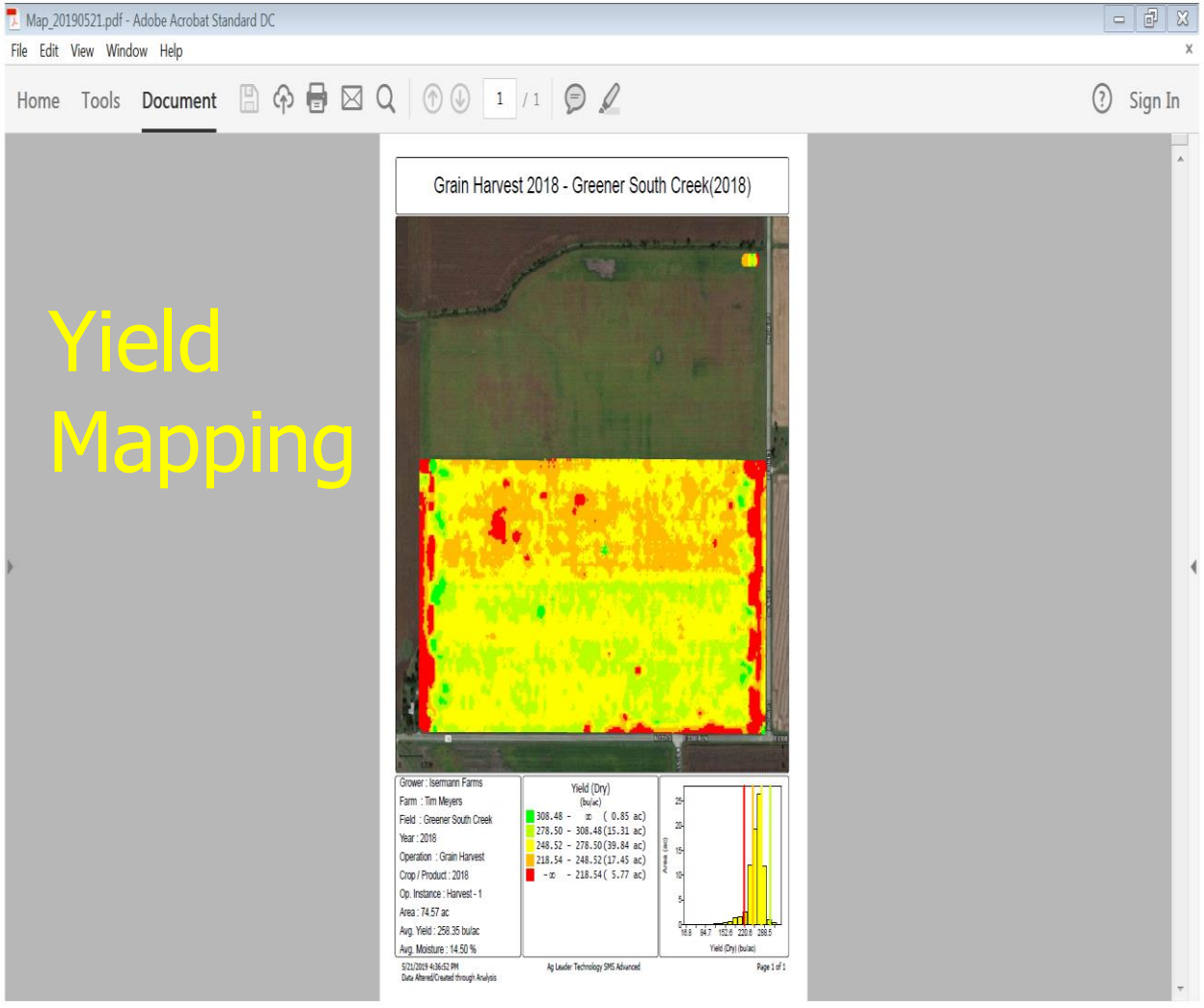
Limited Fall Application of N & P

Mapping: Site Verification and Yield Mapping. What went where and what were the results.

Site Verification



Yield Mapping



Soil Testing, both grids and zones.

8.50 x 11.00 in

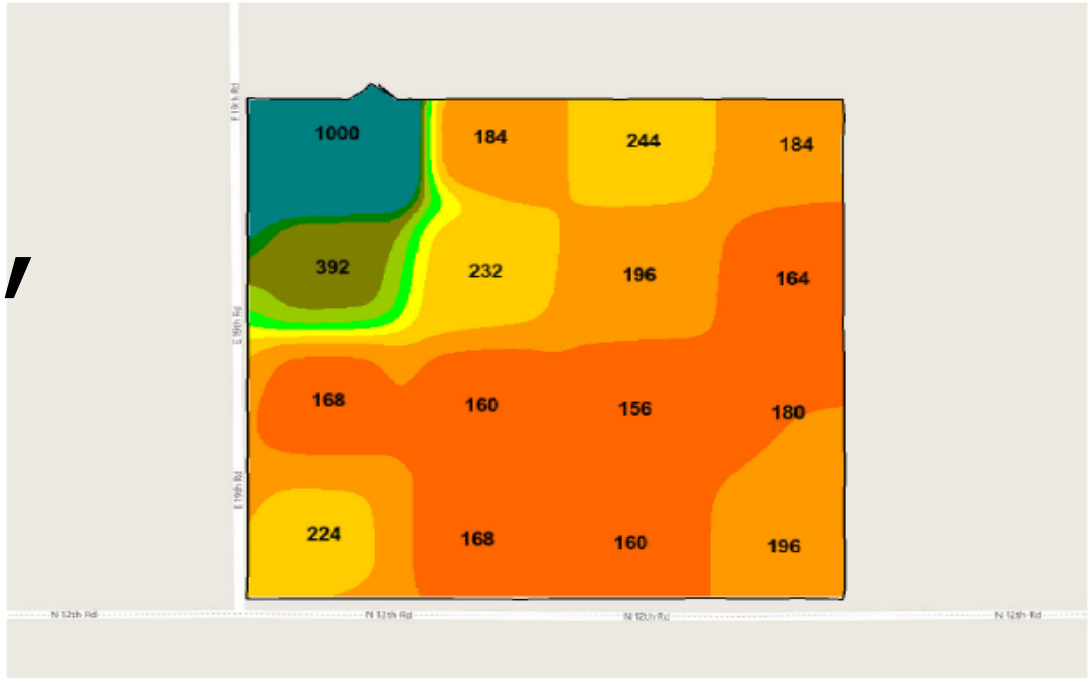
USI UNITED SOILS, INC.

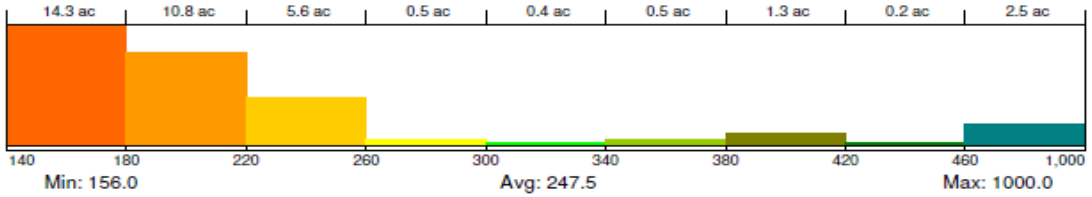
Data Analysis Report

Location: Non-Registered
Customer: Isermann Farms
Date: 2017-04-25

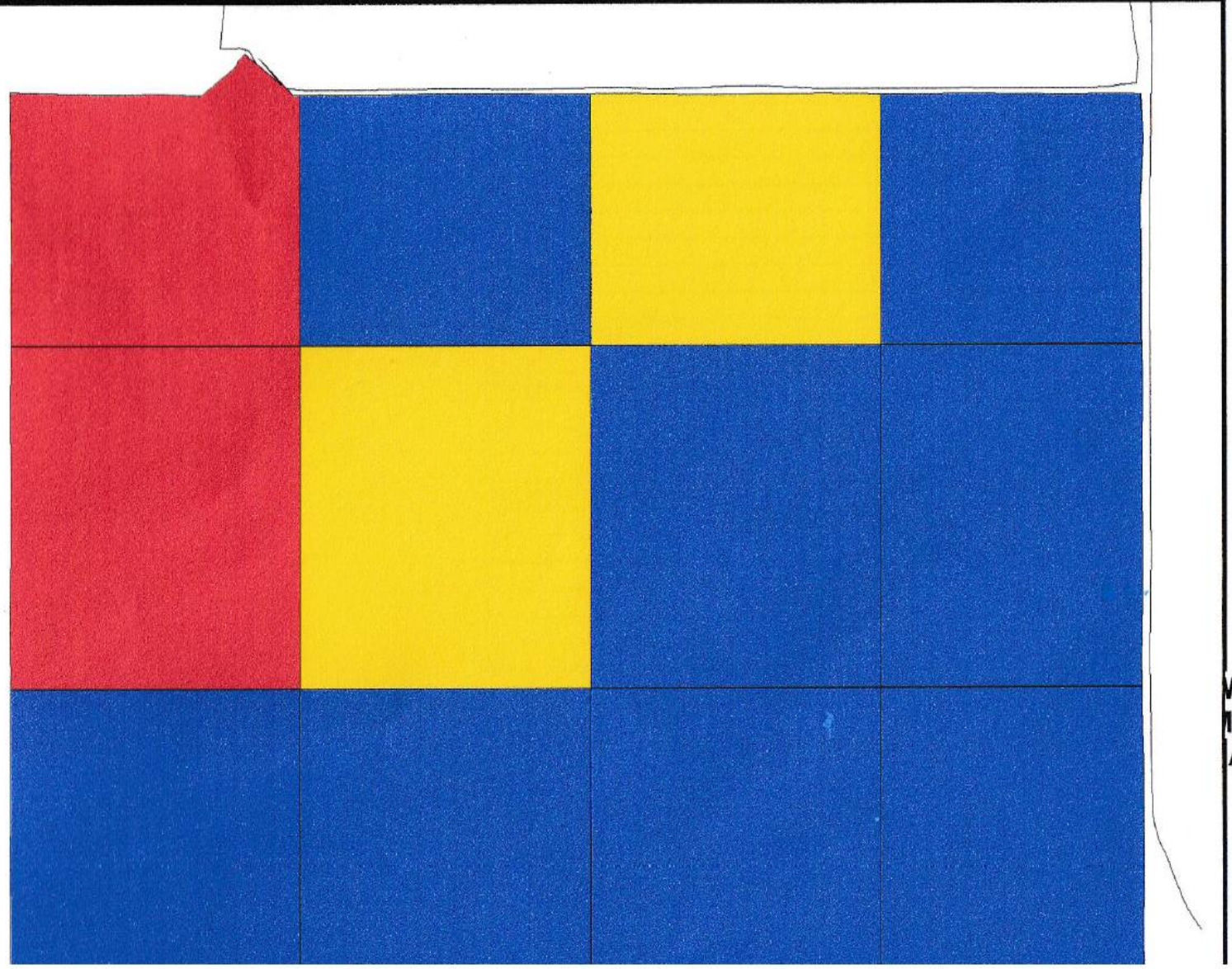
Farm: All
Field: Hagi South 40
Acres: 36.38

Potassium (lb/ac)





April 25, 2017, 2:32 pm EDT



Client: ISERMANN FARMS
Farm: ISERMANN FARMS
Field: HAGISOUTH40
Crop: 2017 SOYBEANS
Name: HAGISOUTH40 - Spreac
Type: Spreading
Date: 4/27/2017
50%DAP50%Potash: 6661.770 pounds
Unit Cost: $0.00/lbs
Product Cost: $0.00
Applied Area: 36.343 ac
Minimum Rate Applied: 100.000 lbs/ac
Maximum Rate Applied: 200.000 lbs/ac
Average Rate Applied: 183.304 lbs/ac

Variable rate fertilizer

till reduces fuel,
ment, labor costs,
rosion.

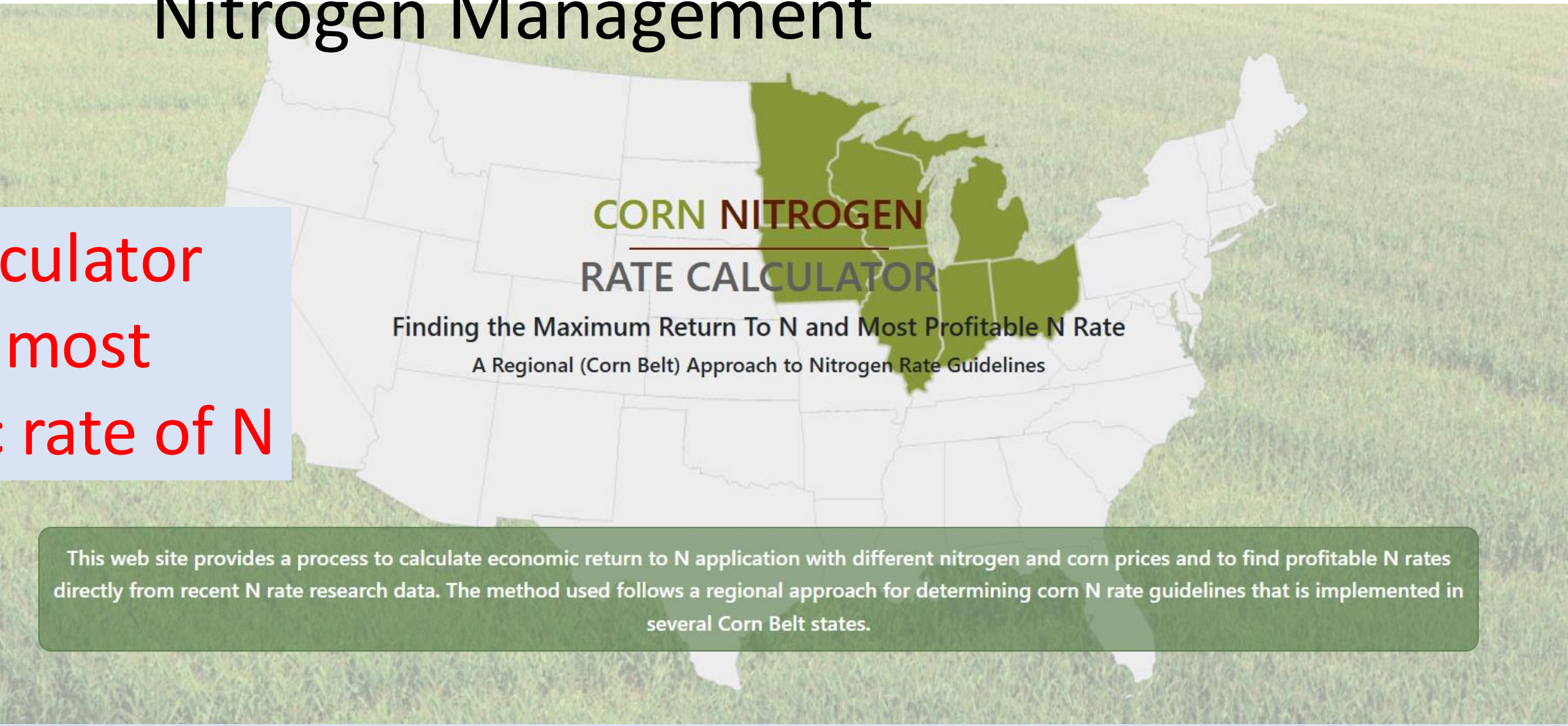
Fertility Plan 2025

Crop Year 2025 Fertility					
Corn following soybeans					
Nutrient # per acre	N	P	K	S	
Fall Strip Till	27	69	30	10	150# DAP, 50# Potash, 10# Sulfur, elemental, 6" deep in strip
Spring Strip Refresh	60	0	0	0	20 Gal per acre 28% N in strip
Starter Planter	7	24			6 gal/acre 10-34-00 starter fertilizer
Total after planting	94	93	30	10	
MRTN	178				
Sidedress # N	84				28 gal per acre 28% N

ltiple applications of N & P spread risk of loss

Nitrogen Management

culator
most
rate of N



num return to P & K under development by University of Illi

CN
RC

CALCULATOR ABOUT MAPS HELP

SINGLE PRICE MULTIPLE PRICE

Rates and Charts

DISPLAY CHART

- [x] Return to N
- [ ] % of Max Yield
- [ ] EONR Frequency
- [ ] EONR vs. Yield

HELP

Definitions
Calculated Values

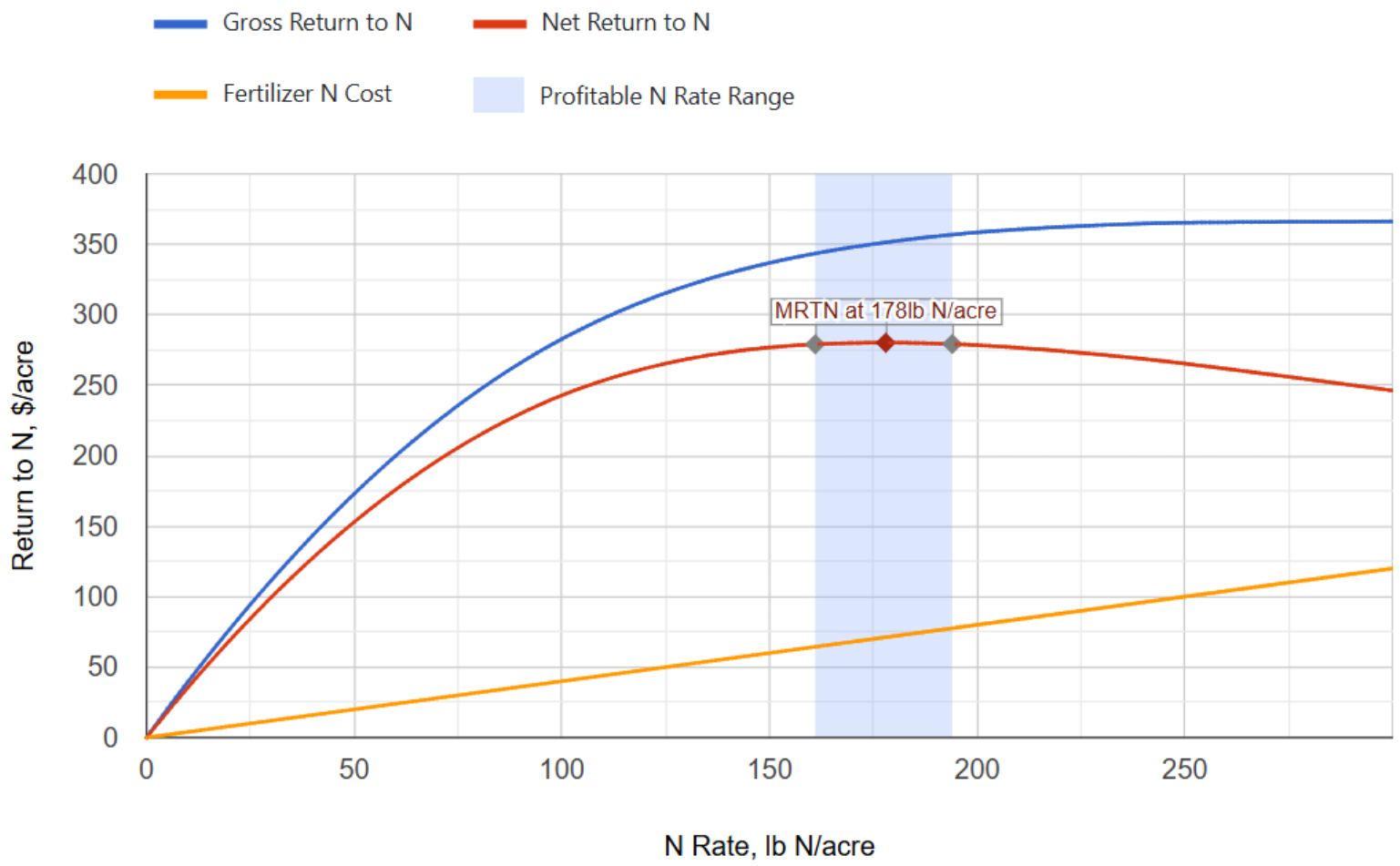
RECALCULATE

RETURN TO INPUT

State : **Illinois**
Region : **North**
Number of sites : **65**
Rotation : **Corn following soybean**

Nitrogen Price ($/lb):	**0.40**
Corn Price ($/bu):	**4.00**
Price Ratio:	**0.1**
MRTN Rate (lb N/acre):	**178**
Profitable N Rate Range (lb N/acre):	**161 - 194**
Net Return to N at MRTN Rate ($/acre):	**$280.23**
Percent of Maximum Yield at MRTN Rate:	**98%**
UAN (32% N) at MRTN Rate (lb product/acre):	**556**
UAN (32% N) Cost at MRTN Rate ($/acre):	**$71.20**

Return to N


Gross Return to N
Net Return to N
Fertilizer N Cost
Profitable N Rate Range
MRTN at 178lb N/acre
Return to N, $/acre
N Rate, lb N/acre
0
50
100
150
200
250
300
350
400

Collaboration with University Researchers to prove our N program works..

ILLINOIS ACES

Data-Intensive Farm Management Project

Information for Participating Farmers

What is DIFM?

DIFM (Data Intensive Management Project) uses precision agriculture technology, with researchers and farmers working together conducting large-scale, on-farm “checkerboard” field trials, gathering vast amounts of data on how crop yields respond to input application rates, field characteristics, and weather. The goal of DIFM is to revolutionize farm management, working with farmers and crop consulting to implement scientific experiments on their own farms, enabling them to increase profits by making data-driven management decisions.

Five different rates of Nitrogen were randomly applied across the field resulting in over 300 separate areas.

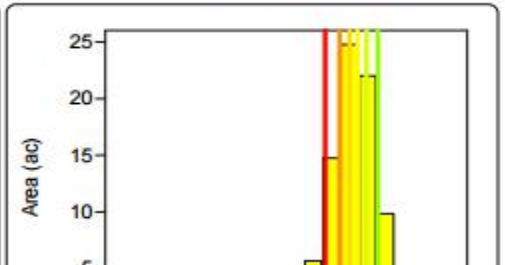
Nitrogen
accomplished
ress
of Nitrogen.
ontrolled by a
the cab using
prescription
the University
rs.

Resulting yield map which was analyzed along with the Nitrogen application map.

Grower : isermann
Farm : florence
Field : corn21
Year : 2021
Operation : Grain Harvest
Crop / Product : 21
Op. Instance : Harvest - 1

Yield (Dry)
(bu/ac)

226.33 - 1,762.69	(11.93 ac)
217.03 - 226.33	(12.29 ac)
209.82 - 217.03	(12.30 ac)
203.13 - 209.82	(12.31 ac)
195.17 - 203.13	(12.31 ac)
183.40 - 195.17	(12.26 ac)
5.20 - 183.40	(11.80 ac)



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Report on DIFM Field Trial Isermann_Florence80_2021

Field Management Information

- Grower's status quo nitrogen rate strategy: 130 lbs/ac uniform application.
- Nitrogen target rates: 63, 94, 130, 164, 203 (lbs /ac)
- Applicator width: 40 feet
- Harvester width: 20 feet

Summary

A corn nitrogen rate trial was conducted on the Isermann_Florence80 field in crop year 2021. The trial was implemented with a high level of accuracy. The best estimate provided by the data and model is that, under growing conditions identical to those of the field in 2021, implementing the recommended site-specific nitrogen application rate strategy would have increased profits by approximately $2/ac. The data and model placed a 95% level of statistical confidence that this profit gain would have been between approximately $1 and $4 per acre. In short, the data and analysis provided strong evidence that the farmer's status quo management plan was quite efficient, and DIFM recommends no manor changes to the current N management strategy.

Trial Design and Implementation

Plots were all 40 feet wide, uan32 applicator was 40 feet wide, and harvester was 20 feet wide. The field's status quo nitrogen application plan (that is, the one that would have been used had there been no field trial conducted) was to apply 130 lbs/ac uniformly across the field. The status quo rate was assigned to a buffer zone around the perimeter of the trial and ditches, but observations from the buffer zone were not included as part of the trial in later analysis. The producer applied a 0 lbs/ac base N rate before implementing the

Animal Waste Application

Livestock Waste Application

GPS Auto-steer application to achieve an even application.

Grower : Isermann Farms
Farm : Isermann
Field : Fred 80 East
Year : 2018
Operation : Site Verification
Crop / Product : NO Product
Op. Instance : Instance - 1
Area : 20.70 ac
Start Date : 5/1/2018
End Date : 5/2/2018
Working Time : 1.015 h
Avg. Productivity : 20.40 ac/h
GPS Count : 3653

Dataset - Name
spreader (20.76 ac)

5/21/2019 4:39:35 PM Ag Leader Technology SMS Advanced Page 1 of 1

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[redacted]

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Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: ISERMANN FARMS INC
1931 N 12TH RD
STREATOR, IL 61364

Purchase Order: 311-6521

Lab Number: 69939
Sample ID: 1
Manure Type: BEEF, SOLID WITH BEDDING (5)

Date Received: 11/6/2024
Date Reported: 11/13/2024 Page: 1 of 2

MANURE ANALYSIS

Analysis	Unit	Analysis Result (As Received)	Pounds Per Ton	First Year Availability @ Pounds Per Ton
Moisture	%	87.91	1758	
Solids	%	12.09	242	
Ash @ 550 C	%	3.52	70.4	
Organic Matter (LOI @ 550 C)	%	8.57	171.4	
Organic Carbon (LOI @ 550 C)	%	4.97	99.4	
Carbon:Nitrogen Ratio (C:N)	-		5.8:1	
Nitrogen, Total Kjeldahl (TKN)	%	0.862	17.2	9.3 *
Phosphorus (P)	%	0.174	8.0 (as P_2O_5)	8.0 * (as P_2O_5)
Potassium (K)	%	0.404	9.7 (as K_2O)	9.7 * (as K_2O)
Sulfur (S)	%	0.08	1.6	0.9 #
Magnesium (Mg)	%	0.12	2.4	1.3 #
Calcium (Ca)	%	0.12	2.5	1.3 #

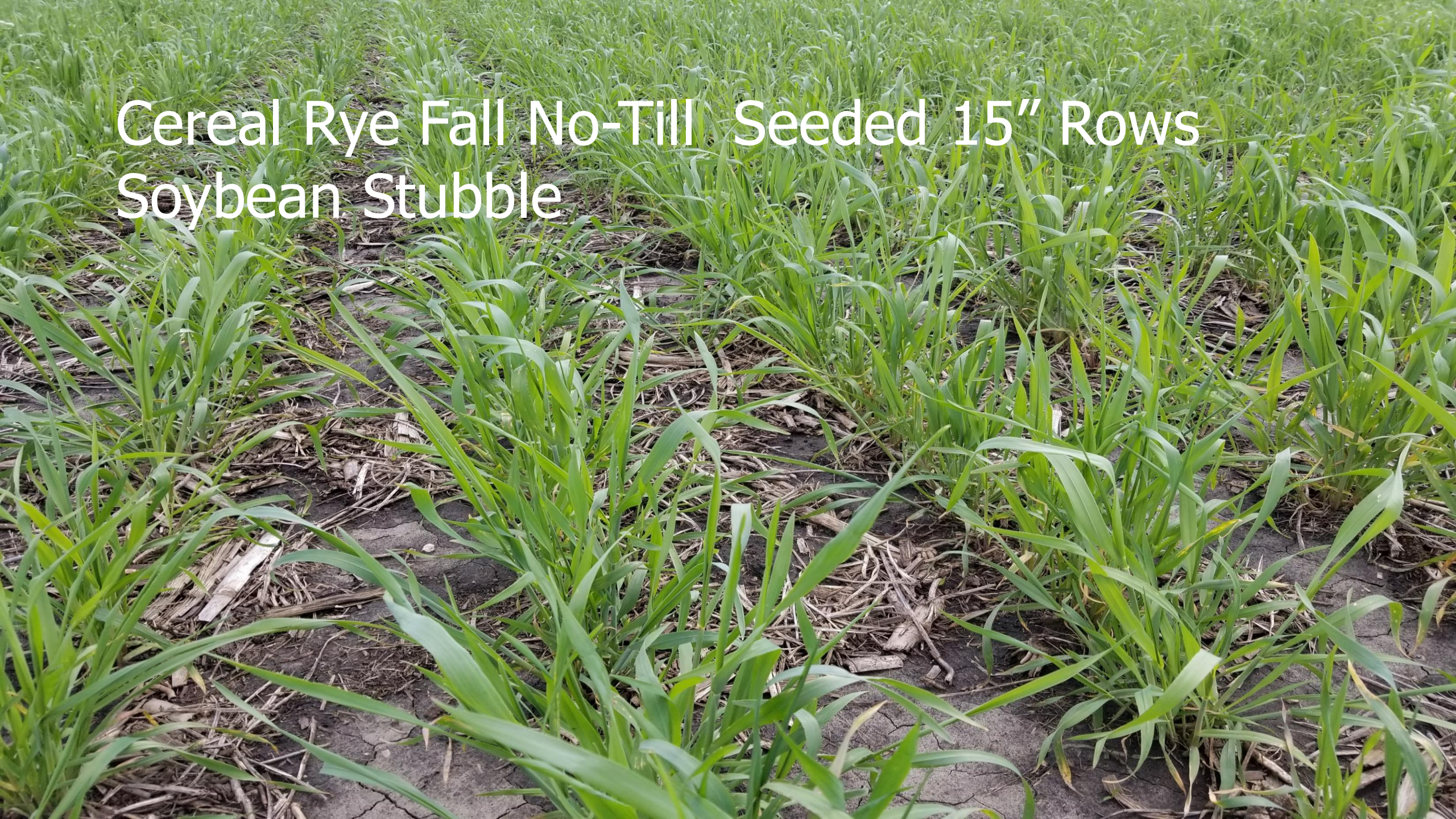
over Crops ?

er nutrients
sion
soil health
grazing for

ntrol

Radish and Cereal Rye Cover Crops Aerial Seeded into Standing Corn


Wheat & Cereal Rye Fall
No-Till Seeded 8” rows
Corn Stubble


Cereal Rye Fall No-Till Seeded 15” Rows
Soybean Stubble


Soybeans no-tilled into corn residue and cereal rye cover crop


beans no-tilled into corn
ble with no cover crop
resulting weed pressure.


Reduced tillage
No-till soybeans
Cover crop
DANGER
TRACTOR SUPPLY Co


No-till soybeans into green cover crop

Strip till

Planting equipment

USDA Conservation Program Participation

NRCS (National Resources Conservation Service) USDA Programs participating in:

Environmental Quality Incentives Program (EQUIP)

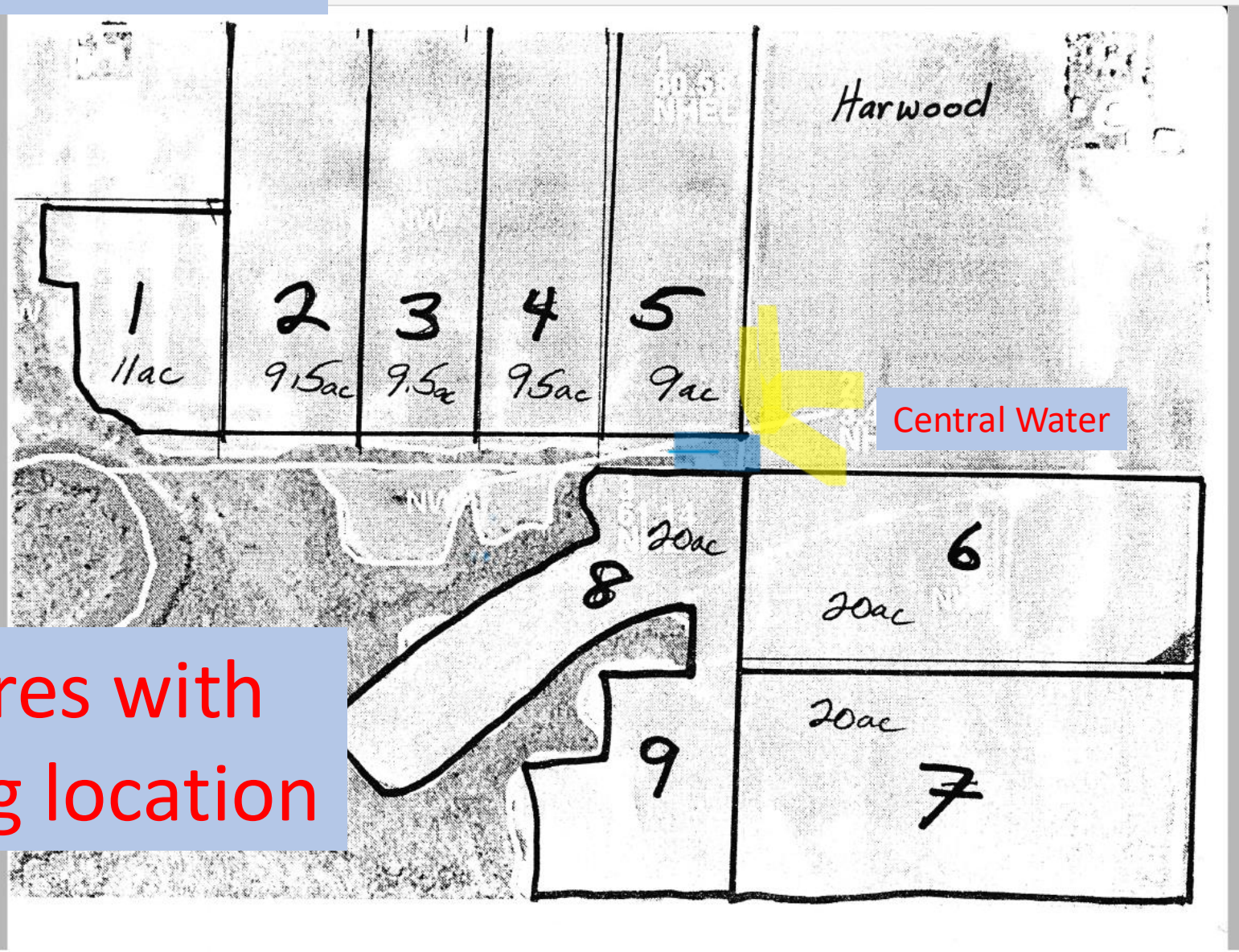
Prescribed Grazing Plan with Livestock Watering System

Comprehensive Nutrient Management Plan for Beef Operation

er cattle pastures

ore

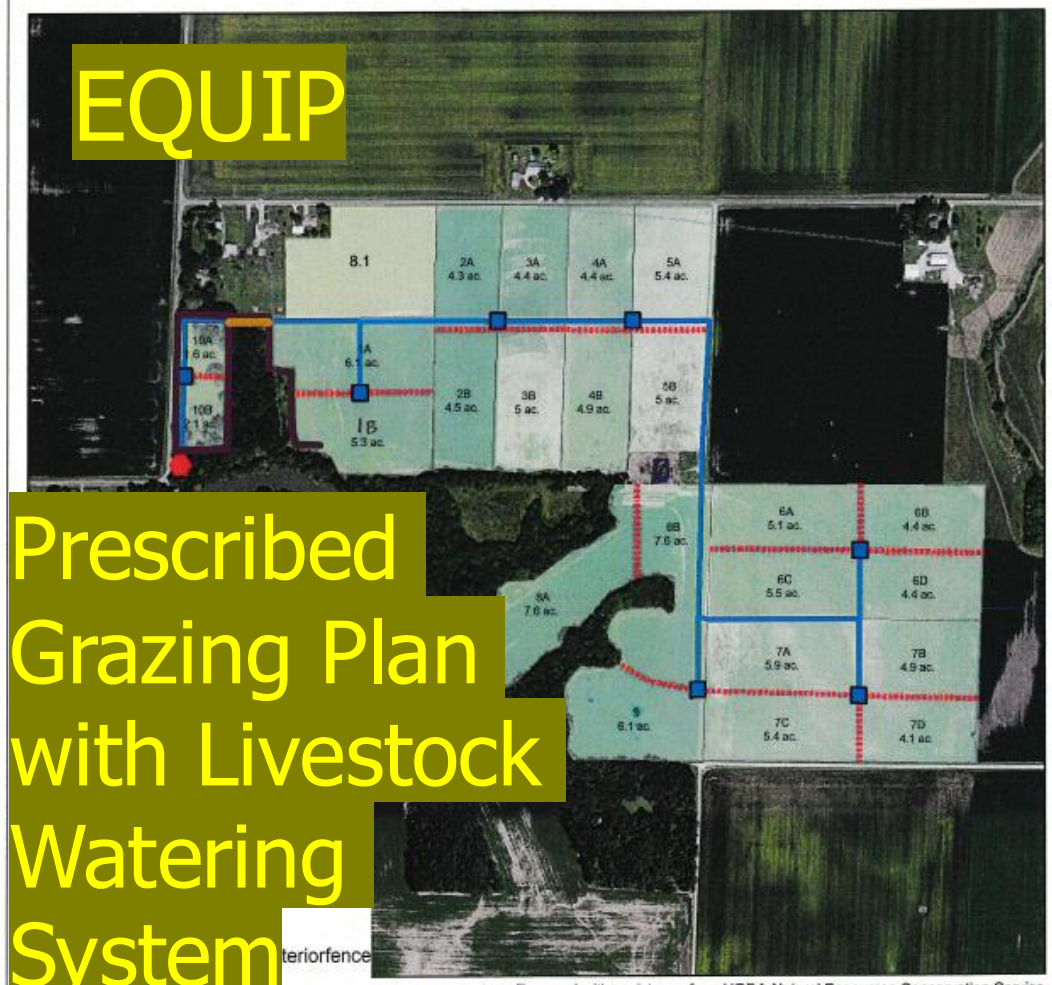
arate pastures with
tral watering location



ting single location watering system

EQUIP

Prescribed Grazing Plan with Livestock Watering System



teriorfence

Prepared with assistance from USDA-Natural Resources Conservation Service

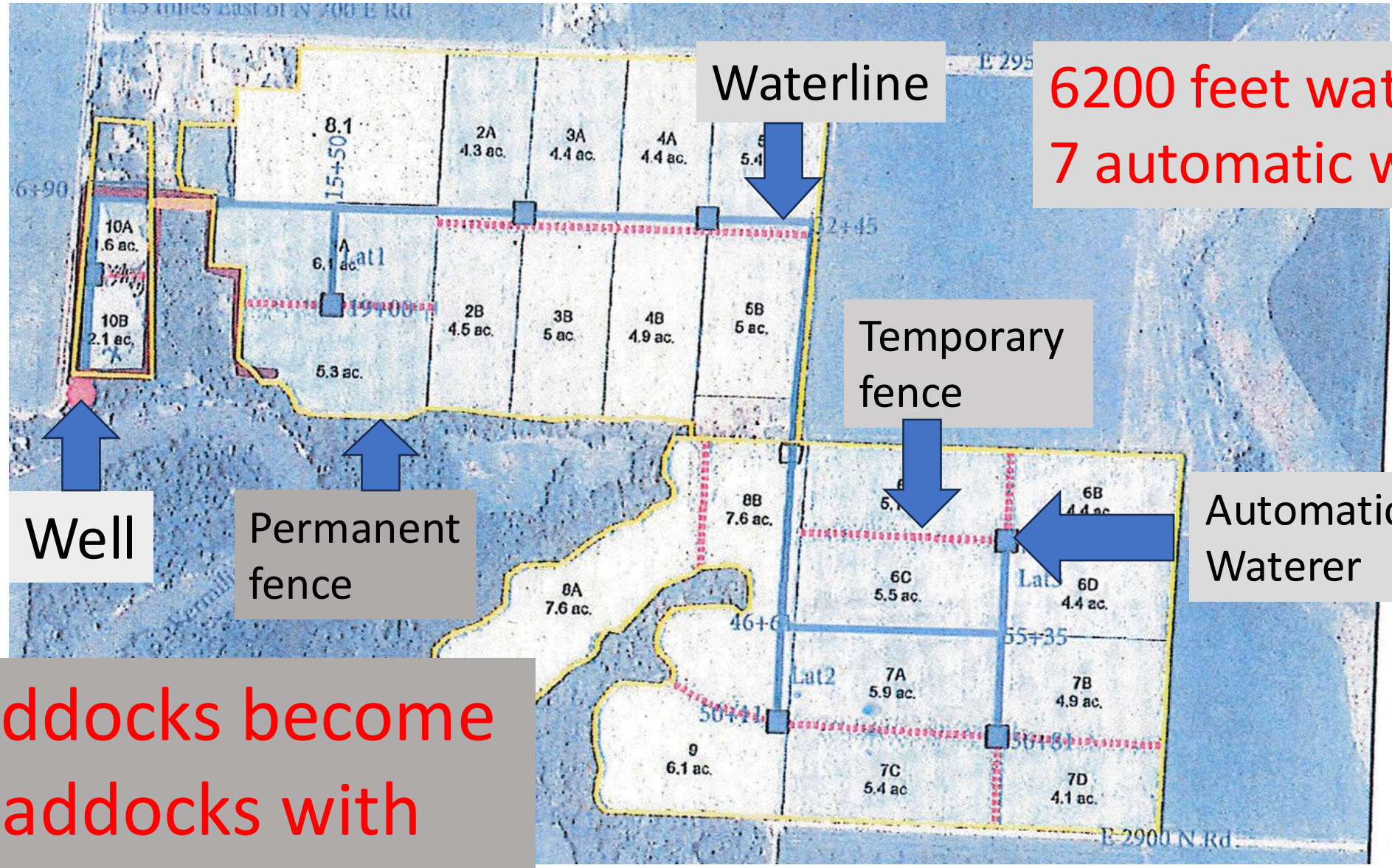
existing well
WateringFacility
Water pipeline
Temporary Fence
Paddock
clu_a_il099

Existing watering Facility

USDA

380 0 380 760 1,140 1,520 Feet

N


Waterline
6200 feet waterline
7 automatic waterers
Temporary fence
Automatic Waterer
Well
Permanent fence
9 paddocks become 20 paddocks with temporary fence.
8.1
2A 4.3 ac.
3A 4.4 ac.
4A 4.4 ac.
10A 1.6 ac.
10B 2.1 ac.
6.1 ac.
Lat1
2B 4.5 ac.
3B 5 ac.
4B 4.9 ac.
5B 5 ac.
5.3 ac.
8B 7.6 ac.
8A 7.6 ac.
6B
6C 5.5 ac.
6D 4.4 ac.
Lat3
46+6
55+35
Lat2
7A 5.9 ac.
7B 4.9 ac.
9 6.1 ac.
7C 5.4 ac
7D 4.1 ac.
E 2900 N Rd

Thrifty King CT4-2000 - Ritchie

https://ritchiefount.com/product/thrifty-king-ct4-2000/

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Thrifty King CT4-2000

SKU: #16430

Thrifty King insulates the water so well that you can make it through the winter without supplying heat in many areas, and it takes little electricity in those areas where the winter is severe or when energy free requirements are not met. The water is completely surrounded by fully insulated polyethylene plastic – including an insulated elliptical enclosure covering the drink areas. The covered water keeps the water cooler in summer and reduces loss of water due to evaporation. The closure also protects against mosquitoes breeding, lowering the risk of the spread of West Nile Virus. The CT4-2000 is a four trough automatic waterer for cattle ideal for a fence line or stand-alone application. Optional summer cover is available for the warmer months.

HERD CAPACITY

Beef	200

Seven automatic watering stations

Installed automatic waterer

IMG_20190524_0002.pdf - Adobe Acrobat Standard DC

File Edit View Window Help

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Comprehensive Nutrient Management Plan for Beef Operation

Isermann Farms, Inc.
David Isermann

Comprehensive Nutrient Management Plan

Beef Cattle Operation

La Salle County-
Streator, Illinois

Prepared by
Alan M. Madison TSP 03-2411
Matthew L. Wagner, P.E. TSP 06-5610
July 2018

Producer Copy

Looked at the following

Soil tests
Yields
Soil types
Farming practices
Manure rates

Identified fields in the plan

Legal Description:

State and County: IL, LaSalle County, Illinois

Legend

815A12162UE

Area Errors

Must Not Overlap

USDA

480 0 480 960 1,440 1,920 Feet

N

entify
nd
sess
oil type
r N loss

Field ID	Tile > 50%	High Risk N-Leaching Soil Type	Soil Type	*Application Timing	Risk Assessment
Baker 120	No	No – Elburn	Silt Loam	Fall seeded cover crops	Low
Hagi North	Yes	No – Drummer	Silty Clay Loam	Fall seeded cover crops	Low
Hagi South	Yes	No – Arrowsmith	Silt Loam	Fall seeded cover crops	Low
Fred West	Yes	No – Drummer	Silt Clay Loam	Fall seeded cover crops	Low
Fred East	Yes	No – Drummer	Silty Clay Loam	Fall seeded cover crops	Low
Greener 90 West	Yes	No – Arrowsmith	Silt Loam	Fall seeded cover crops	Low
Greener 90 Mid	Yes	No – Hartsburg	Silty Clay Loam	Fall seeded cover crops	Low
Greener 90 East	Yes	No – Hartsburg	Silty Clay Loam	Fall seeded cover crops	Low
Florence 80	Yes	No – Hartsburg	Silty Clay Loam	Fall seeded cover crops	Low

* See NRCS Nitrogen Management Guidelines to compare nitrogen risk assessments with optional application practices and application timing.

Fields with High Risk N-Leaching Characteristics

None of the dominant critical soil types, or any combination equal to or greater than 50%, involve soil types that fall in the high risk category for nitrogen risk assessment. However, all of the fields in the plan, with the exception of Baker 120, contain tile on more than 50% of the crop ground. Thus, all fields (except Baker 120) must be evaluated and managed for nitrogen risk concerns. David has addressed this concern under existing management practices and will continue to do so under the plan by utilizing fall seeded cover crops, as well as applying both commercial and organic nitrogen in the spring within 30 days of planting.

ze soil
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ure
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etermine if
d K will
ed limits.

2. Projected P & K Levels

Field ID	*P Level at Start of Plan*	*P Level at End of Plan*	**Years to P test of 300*	*K Level at Start of Plan*	*K Level at End of Plan*
Baker 120	40	44	260	198	292
Hagi North	52	49	N/A	256	300
Hagi South	36	49	82	184	298
Fred West	78	58	N/A	268	285
Fred East	71	43	N/A	338	337
Greener 90 West	36	48	88	246	303
Greener 90 Mid	57	54	N/A	332	314
Greener 90 East	77	49	N/A	394	383
Florence 80	56	47	N/A	302	299

Notes

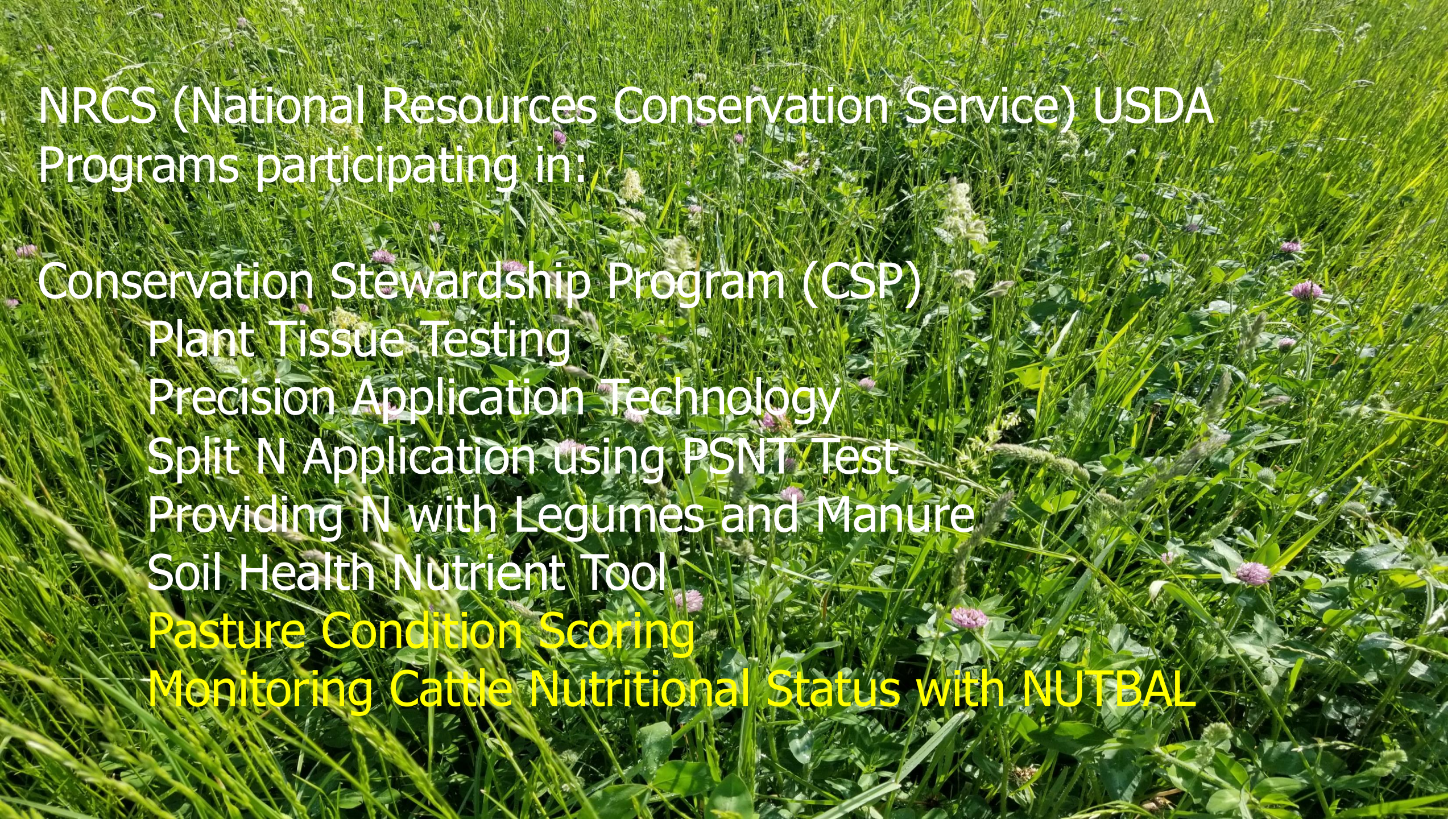
Equations used to determine change in soil test P and K:

Change in P (Lb/A) = Round(NetP2O5/9)

Change in K (Lb/A) = Round(NetK2O/4)

Years to P test of 300 Lbs/acre calculated from the beginning of the plan.

* Using the manure application rates as provided in the CNMP, none of the fields present a phosphorus buildup concern. Although Baker 120, Hagi South and Greener 90 West show a slight increase in levels of phosphorus over the course of the four-year plan, this increase is negligible as it will take 82 to 260 years to reach a P test of 300 Lbs/acre. Accordingly, phosphorus buildup is not a true concern on those fields. The fields show an increase to reach healthy levels of phosphorus in the soil. This is achieved by commercial fertilizer applications in the fall.


NRCS (National Resources Conservation Service) USDA Programs participating in:
Conservation Stewardship Program (CSP)
Plant Tissue Testing
Precision Application Technology
Split N Application using PSNT Test
Providing N with Legumes and Manure
Soil Health Nutrient Tool
Pasture Condition Scoring
Monitoring Cattle Nutritional Status with NUTBAL

PSNT, Preside-dress Nitrate Test

[redacted]

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3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: ISERMANN FARMS INC
1931 N 12TH RD
STREATOR, IL 61364

Date Received: 6/18/2024
Date Reported: 6/19/2024
PO Number: 170-0161

NITROGEN ANALYSIS

Sample ID	Lab Number	Nitrate NO_3-N ppm	Ammonium NH_4-N ppm
1	35909	18	
2	35910	17	
3	35911	20	
4	35912	21	
5	35913	23	

#1 HagiBaker South
#2HagiBaker South in row
#3HagiBaker North
#4 Greener 90 Center 30
#5 Greener 90 East 30

Plant Tissue Testing for Nutrient Sufficiency

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Purchase Order: 170-5029

To: ISERMANN FARMS INC
1931 N 12TH RD
STREATOR, IL 61364

Hagi Baker
North

Sample ID: 1
Plant Type: CORN
Growth Stage: PRIOR TO TASSELING
Plant Part: LEAF

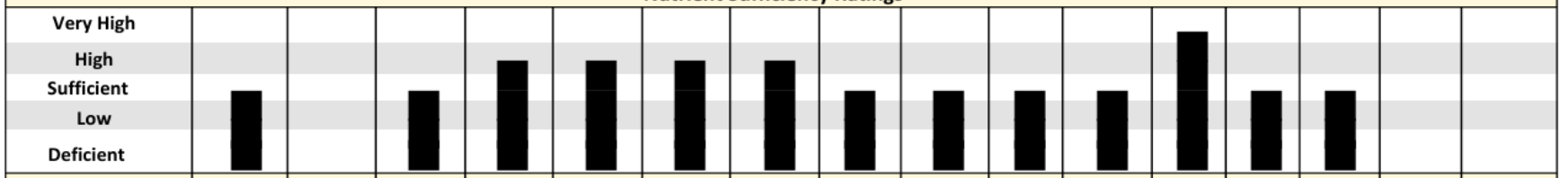
Date Received: 6/18/2024
Date Reported: 6/19/2024

PLANT ANALYSIS REPORT

Date Sampled	Lab Number	Nitrogen (%)	Nitrate Nitrogen (%)	Sulfur (%)	Phosphorus (%)	Potassium (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Boron (ppm)	Zinc (ppm)	Manganese (ppm)	Iron (ppm)	Copper (ppm)	Aluminum (ppm)		
06/15	458809	3.66		0.30	0.46	3.44	0.34	0.58	0.01	9	37	75	281	10	125		
Normal Range		3.00 4.00		0.15 0.50	0.25 0.45	2.00 2.50	0.13 0.30	0.25 0.50	0.01 0.03	4 25	20 60	20 150	30 250	5 15	1 300		

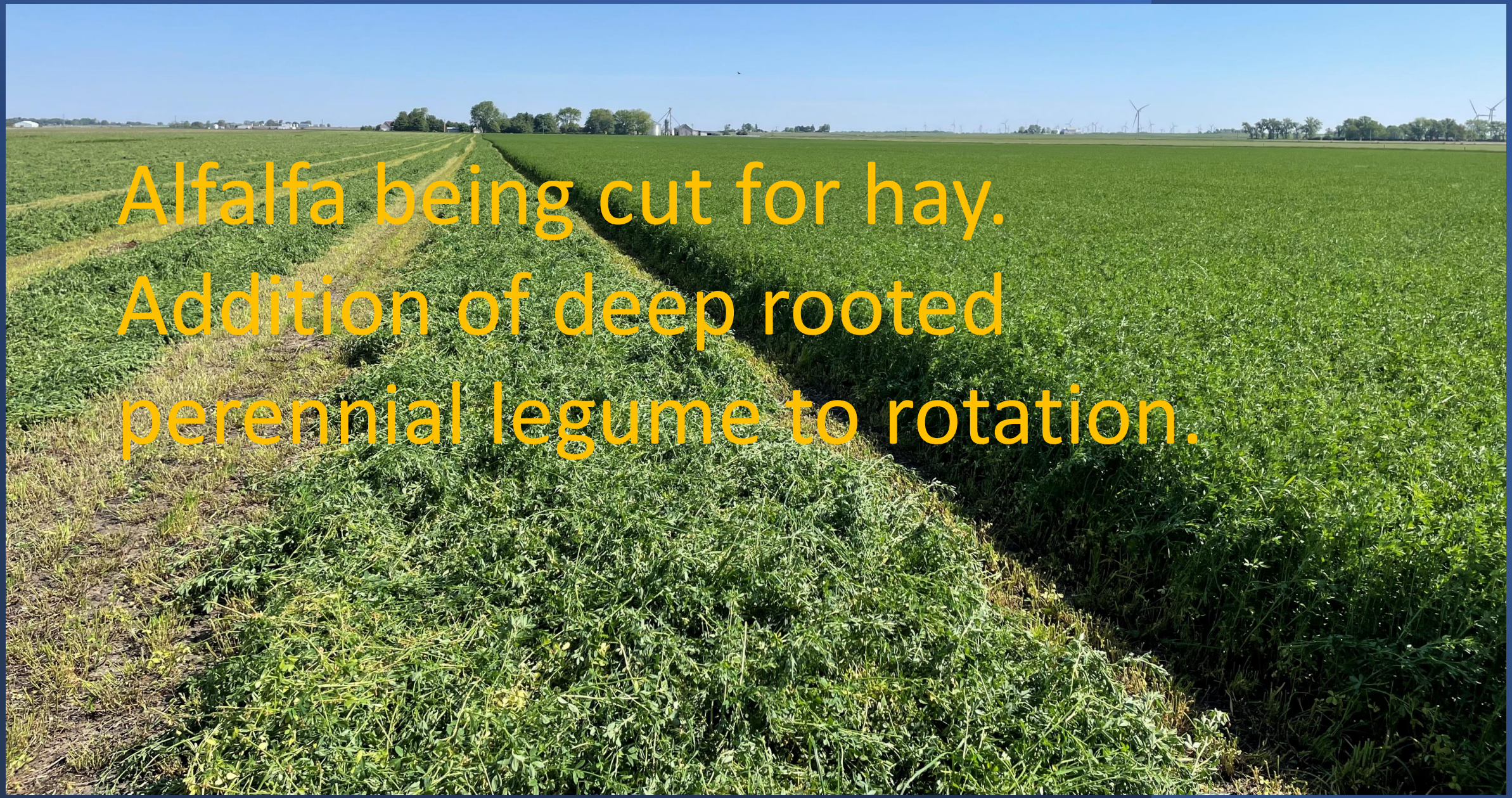
	N/S	N/K	P/S	P/Zn	K/Mg	K/Mn	Fe/Mn	Ca/B								
Actual Ratio	12.3	1.1	1.5	124	10.1	459	3.7	633								
Expected Ratio	10.0	1.4	1.1	93	10.5	143	0.9	259								

Nutrient Sufficiency Ratings



Adding livestock to better utilize resources


Grazing cover crops and crop residue


Alfalfa being cut for hay.
Addition of deep rooted perennial legume to rotation.


Forage oats baled for hay.
Summer annual to allow manure application in summer.

Hay test

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To: ISERMANN FARMS, INC
1931 N 12TH RD
STREATOR, IL 61364
USA

COPY: PD CK 20705

PO Number: 300-6024

Lab Number: 300002
Sample ID: 1

FEED ANALYSIS REPORT

Date Received: 10/26/2016
Date Reported: 10/31/2016

Analysis	Unit	Analysis Result	
		As Received Basis	Dry Basis
Moisture	%	16.24	
Dry Matter	%	83.76	
Nitrogen	%	2.59	3.09
Crude Protein	%	16.22	19.31
Acid Detergent Fiber (ADF)	%	28.8	34.4
Neutral Detergent Fiber (NDF)	%	45.4	54.2
Total Digestible Nutrients (TDN)	%	53.2	63.3
Net Energy of Maintenance (NEM)	Mcal/lb	0.52	0.62
Net Energy of Gain (NEG)	Mcal/lb	0.29	0.35
Net Energy of Lactation (NEL)	Mcal/lb	0.54	0.65
Digestible Dry Matter (DDM)	%		62.1
Dry Matter Intake (DMI)	%		2.2
Relative Feed Value (RFV)	-		107

Approved By: Don Burgess - Agronomist / Technical Services - CPAg/CPSS/CCA

Approval Date: 10/31/2016

Pasture condition scoring to determine condition of pastures at the end of each grazing season

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File Print E-mail Burn Open

Harwood Farm

Paddock	date	Sample	Seeding date	soil type	Lat	Long	% cover	Plants in descending population					
Paddock 4	9/28/2016	1		Milford	41.054263	-88.787750	64.33	alfalfa	orchard grass				
Paddock 4	9/28/2016	2		Milford	41.053290	-88.787885	56.44	orchard grass	alfalfa				
Paddock 4	9/28/2016	3		Milford	41.052431	-88.787597	52.20	orchard grass					
Paddock 4	9/28/2016	4		Thorp	41.051582	-88.788897	24.99	festololium	barnyard	white clover			
9.5 ac													
Paddock 5	9/28/2016	1	4/5/2016	Thorp	41.051833	-88.786580	59.45	orchard grass	festulolium	tall fescue	timothy	meadow brome	alsike
Paddock 5	9/28/2016	2		Thorp	41.052389	-88.786740	60.04	orchard grass	festulolium	tall fescue	timothy	meadow brome	
Paddock 5	9/28/2016	3		Milford	41.053654	-88.786800	15.00	orchard grass	festulolium	tall fescue	timothy	meadow brome	foxtail
Paddock 5	9/28/2016	4		Milford	41.054215	-88.786912	51.49	orchard grass	festulolium	tall fescue	timothy	meadow brome	dandelion
9 ac													
Paddock 6	9/28/2016	1	2015	Starks	41.050756	-88.785526	94.00	orchard grass	red clover	dandelion	thistle		
Paddock 6	9/28/2016	2		Starks	41.050104	-88.784746	89.93	orchard grass	red clover	thistle			
Paddock 6	9/28/2016	3		Starks	41.051220	-88.783863	87.60	orchard grass	red clover	thistle			
Paddock 6	9/28/2016	4		Somonauk	41.050153	-88.783863	81.70	orchard grass	red clover	white clover	thistle		
Paddock 6	9/28/2016	5		Somonauk	41.050261	-88.781583	83.59	red clover	orchard grass	thistle	foxtail		
20 ac													

Why we do what we do.