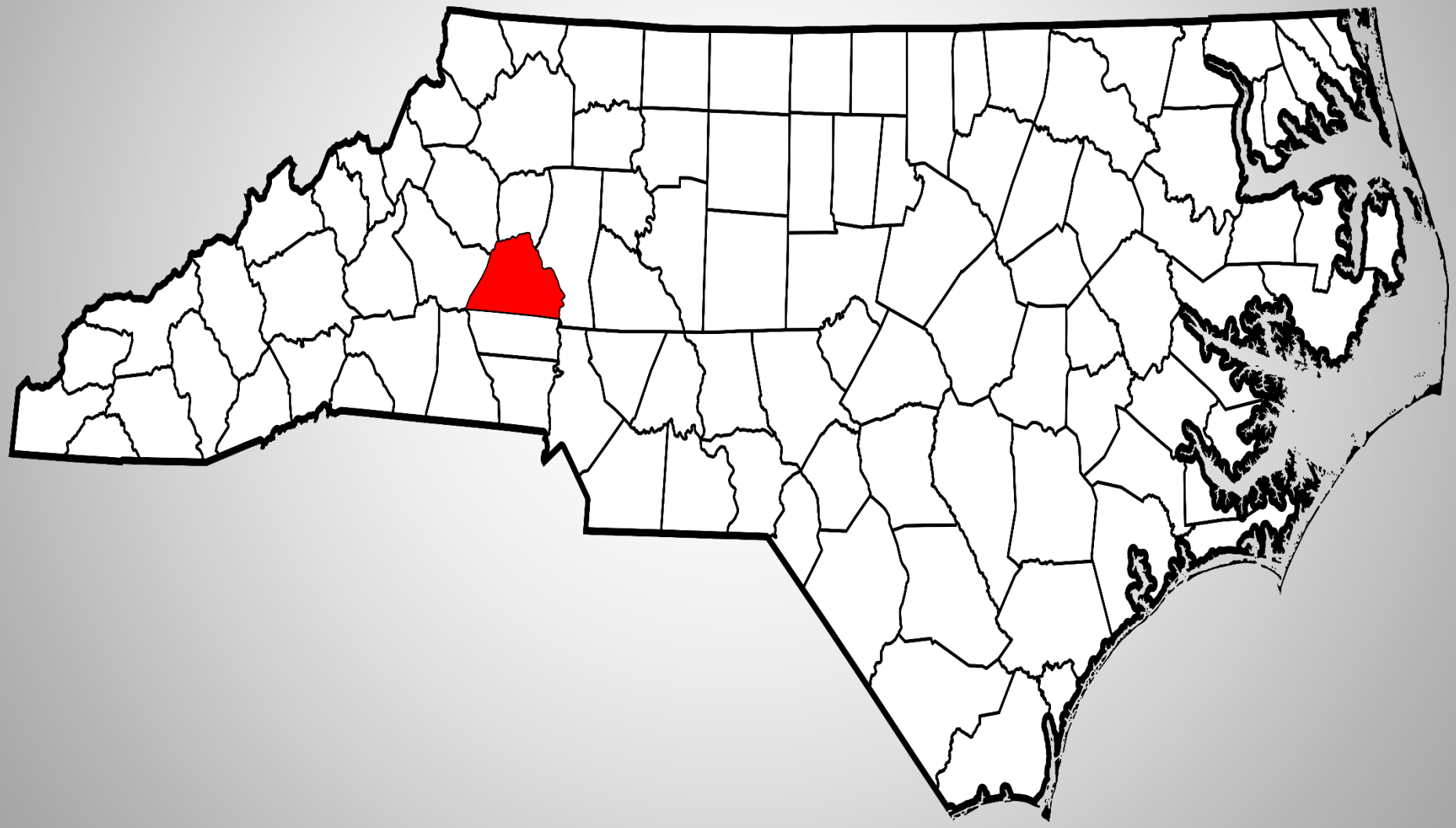
33rd Annual NATIONAL NO-TILLAGE CONFERENCE®

January 7-10, 2025 • Louisville, Ky.

Capturing Record-Breaking Yields with No-Till and Cover Crops

Russell Hedrick

Where we call home




JOHN DEER

Set Your Baselines

Earthworm Counts

2013-2 cu ft. 90K/AC

2023 93 cu ft. 2.3M/AC

Water Infiltration

2013- .5 inches per hr.

2023- 16 inches per hr.

% change in the Soil

Fall 2013 to Spring 2024

790 % Change in CO_2Respiration

625 % Change in WEOC (food) more consumption

80 % Change in SHC: Soil Health Score

OM Increase 6.1%

NT without Covers YR1

NT with Covers YR 4

Water Holding Capasity

- Inches of water per Ft of soil

- Sand- .75-1.00
- Sandy Loam- 1.25-1.40
- Clay- 1.20-1.50
- Silt Loam- 2.00-2.50

- How can we influence it?
- Cover Crop-Soil Aggregates
- OM-1% increase =1 inch WHC

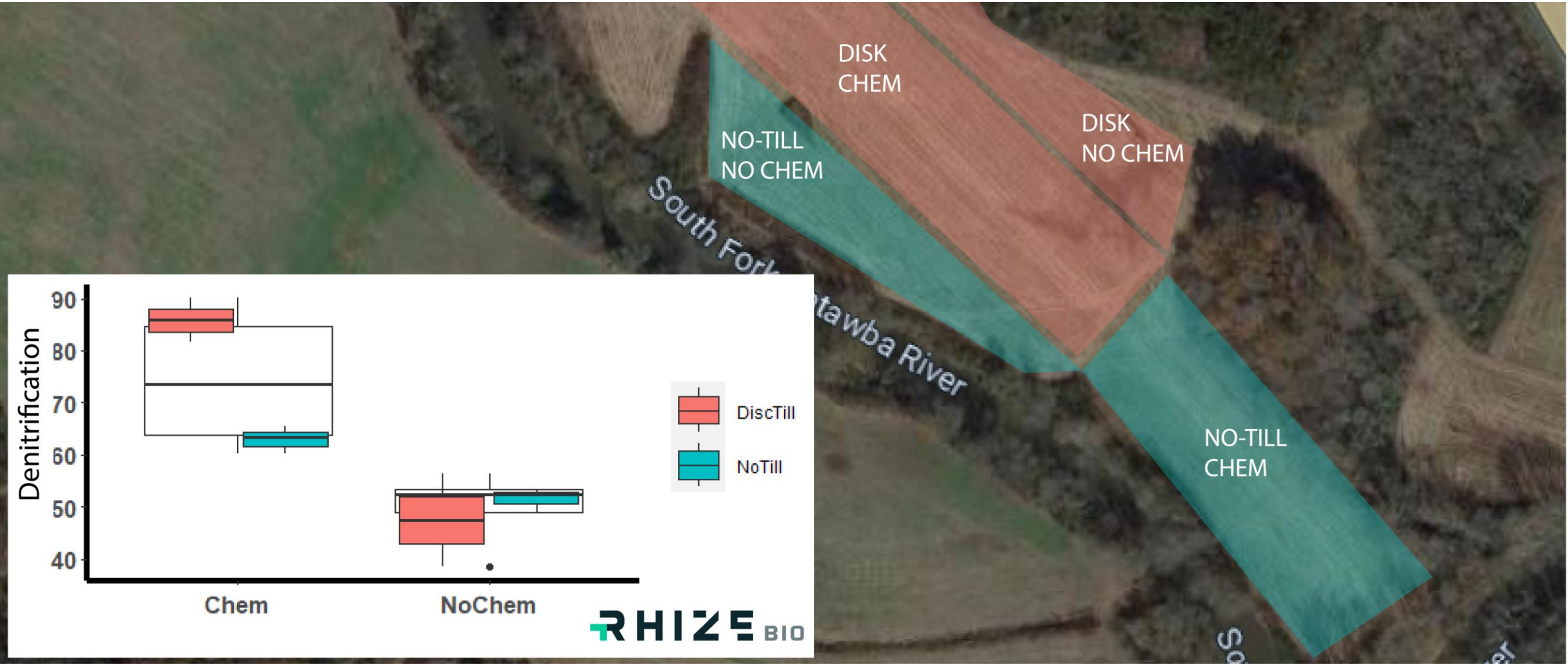
RHIZE BIO

Changes in Microbial Communities in Response to Tillage and Chemical Addition

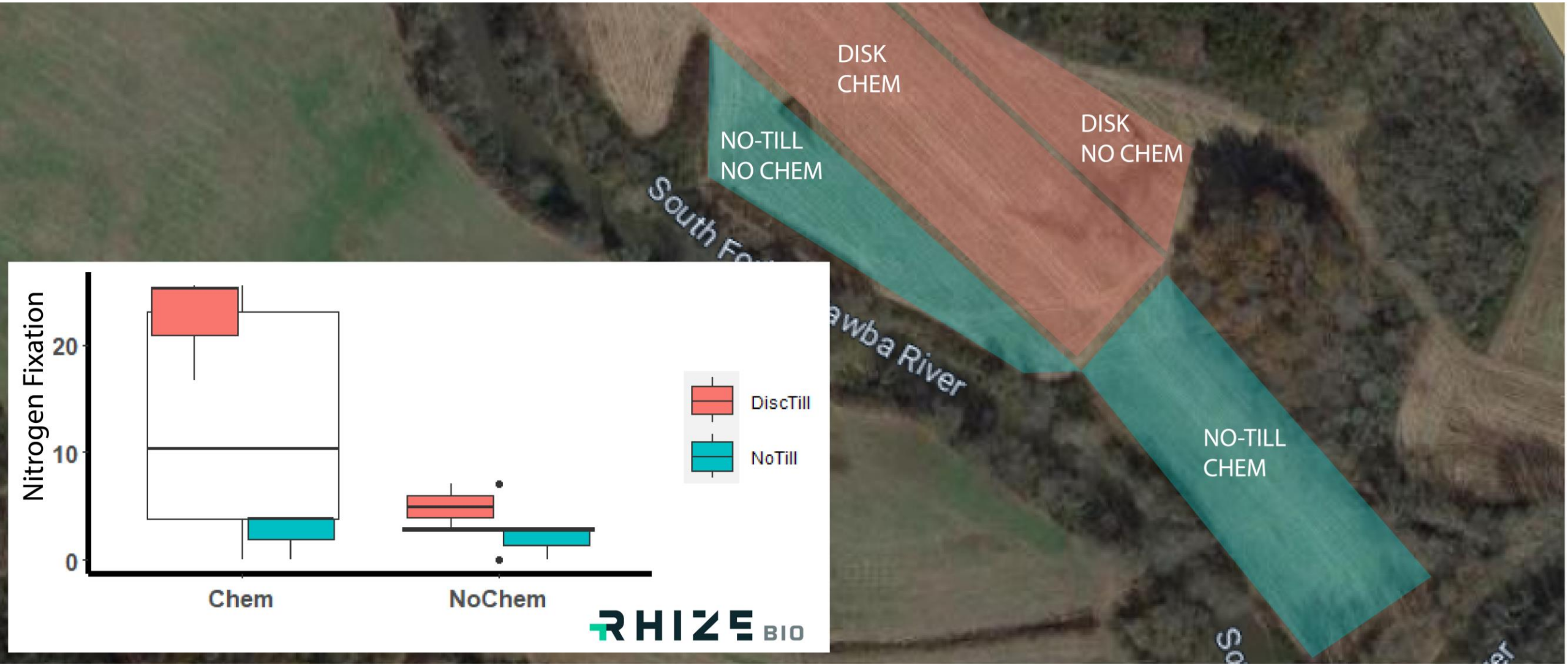
Experimental Design

Group	Group Name	# of Samples	Description
1	No Till Field No Chemical	3	Technical Replicates of homogenized soil from a no till field without chemical treatment
2	No Till Field Chemical	3	Technical replicates of a homogenized soil from a no till field with chemical treatment
3	Disc-Tilled Field No Chemical	3	Technical replicates of a homogenized soil from a disc-tilled field without chemical treatment
4	Disc-Tilled Field Chemical	3	Technical replicates of a homogenized soil from a disc-tilled field with chemical treatment

Under Disc Tillage, Chemical Addition Increases Denitrification

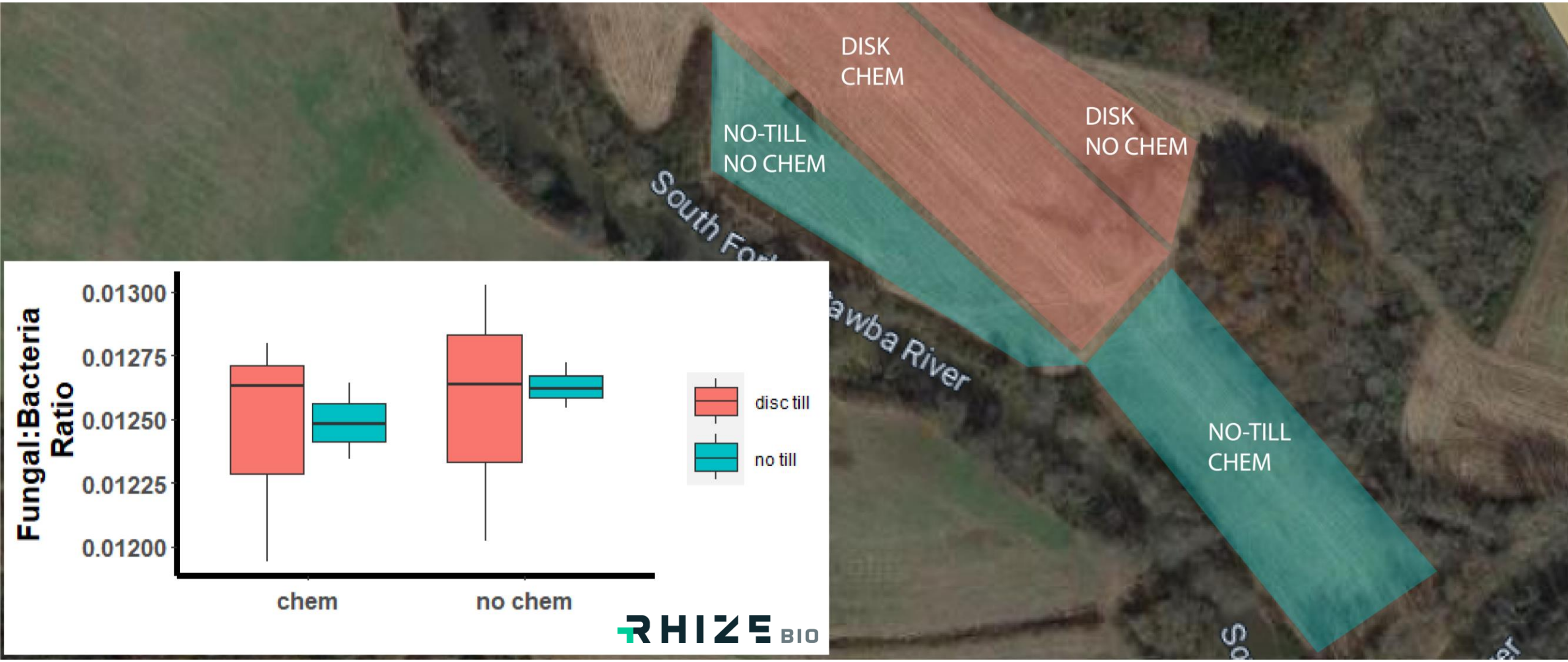


Under Disc Tillage, Chemical Addition Increases Nitrogen Fixation



No Till Increases Organic Nitrogen Breakdown Capacity

Fungal : Bacteria Ratio



Grower	Field ID	Sample ID 1	Organic Matter	CO2-C	% MAC	Organic C:N
Baseline	5/1/2023					
RUSSELL	RF3		5.3	227.23	150.44	11.27
Plots	6/26/2023					
RUSSELL	RF3	RF NTNC	6.6	526.08	179.51	16.7
RUSSELL	RF3	RF NTC	6.1	286.03	179.2	11.51
RUSSELL	RF3	RF DNC	6.4	294.61	161.1	11.91
RUSSELL	RF3	RF DC	6.1	209.85	172.8	12.34
PLFA			Total Living Microbial E	Functional Group Diversity Index		
Basline	5/1/2023		4413.4	1.364		
Plots	6/26/2023		Total Living Microbial E	Functional Group Diversity Index		
		RF NTNC	6229.83	1.141		
		RF DC	4195.02	1.155		
		RF DNC	4029.3	1.292		
		RF NTC	4059.24	1.34		
			.			
			.			

Biological Trials

Check Strip-Yield Set

Pivot Bio-minus 40-0-0-5.5s,

-2.22bu $19 Net ROI

Pivot Bio Full Fert,

+8.06bu -$38 Net ROI

Holganix

+11.7bu +$38.5 Net ROI

Fish shit

+4.62bu +$18 Net ROI

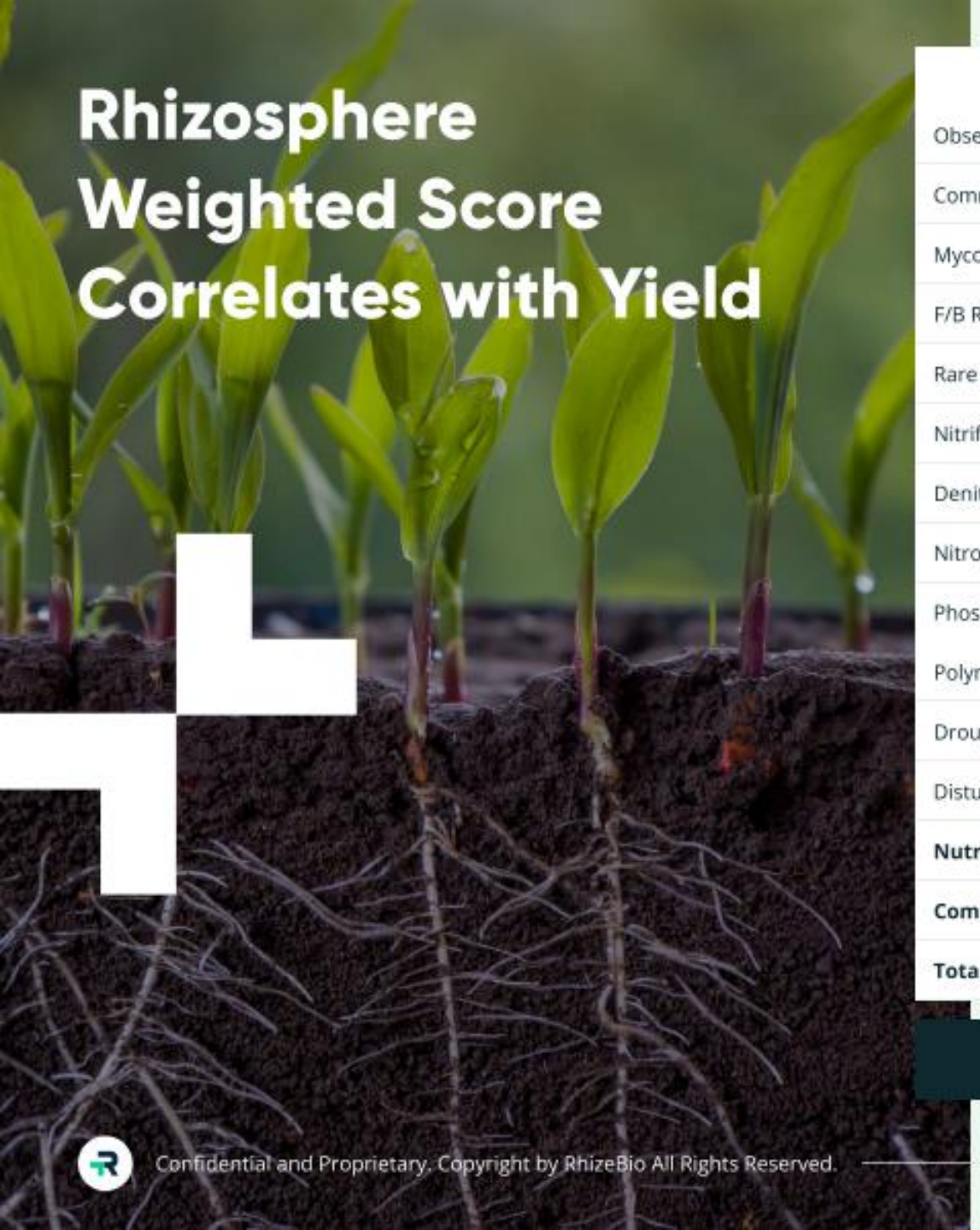
Ensoil Algae

+2.68bu +$4.85 Net ROI

Check strip 2-Soil Revive

+3.27bu +$4.90 Net ROI

Farm Average-188.53



Rhizosphere Weighted Score Correlates with Yield

	Biological 1	Biological 2	Biological 3	Untreated
Observed Genera	62.39%	35.17%	39.41%	23.09%
Community Evenness	4.66%	9.53%	4.66%	0.85%
Mycorrhizae	63.91%	68.53%	69.96%	64.04%
F/B Ratio	5.93%	21.19%	13.77%	1.27%
Rare Biosphere	92.37%	80.72%	84.96%	80.72%
Nitrification	31.5%	37.06%	34.25%	29.41%
Denitrification	67.61%	60.52%	70.08%	83.08%
Nitrogen Fixation	67.61%	71.37%	68.89%	88.55%
Phosphorus Cycling	55.44%	57.3%	55.01%	62.03%
Polymer Degradation	54.26%	55.16%	56.35%	58.4%
Drought Resistance	61.98%	66.9%	60.37%	67.84%
Disturbance	77.41%	79.54%	77.03%	71.62%
Nutrient Cycling Score	1.36	1.60	1.44	1.55
Community Structure Score	2.23	1.94	1.99	1.69
Total Score	3.25	3.31	3.14	3.10

2nd Highest Highest 3rd Highest Lowest


Balance your C:N Rations- goal 40-1

Regen Ag Lab

Account No.:		Name:		Grower:	RUSSELL HEDRICK
Invoice No.:		Company:		Field ID:	ROCKY FORD 3
Date Received:	4/28/2022	Address:		Sample ID 1:	COVER CROP
Date Reported:	4/29/2022	City, State, ZIP:		Sample ID 2:	-

COVER CROP ANALYSIS REPORT

Lab #	1124
Type:	COVER CROP
Stage:	TERMINATION

Forage Yield, Ton/A @ 100 % Dry Matter

Wet Wt, g	3275.1		
Tare Wt, g		**Tons DM/A**	**2.65**
% Dry Matter	15.2		
Area Sampled	9	**C:N Ratio**	**16.7**

Results on a Dry Basis

Nutrient	Value	Units
Carbon	52.20	% C
Nitrogen	3.130	% N
Phosphorus	0.39	% P
Potassium	3.65	% K
Calcium	0.52	% Ca
Magnesium	0.20	% Mg
Sulfur	0.17	% S
Zinc	26.95	ppm Zn
Iron	217.17	ppm Fe
Manganese	70.99	ppm Mn
Copper	8.12	ppm Cu
Boron	4.15	ppm B
Molybdenum	1.32	ppm Mo
Aluminum	98.35	ppm Al

lbs/A of Nutrient based on Tons DM/A

Nutrient	lbs /A	Units
Carbon	2770	C
Nitrogen	166	N
Phosphorus	47.6	P2O5
Potassium	232.5	K2O
Calcium	27.6	Ca
Magnesium	10.6	Mg
Sulfur	9.0	S
Zinc	0.143	Zn
Iron	1.153	Fe
Manganese	0.377	Mn
Copper	0.043	Cu
Boron	0.022	B
Molybdenum	0.007	Mo
Aluminum	0.522	Al

Reviewer Comments

The sample area was not provided and a default of 9 square feet was used for calculations. If this is incorrect, please contact the lab. Thank you!

NCSU Soil Analysis Report

Depth	Density	BD	CEC	pH	BS	P	K
0-4”	0.92	1.14	8	5.5	77	21	103
4-8”	1.00	1.36	6	5.9	80	5	57
8-12”	1.00	.	6	6.1	87	2	46

Depth	Ca	Mg	S	Mn	Zn	Cu	Na
0-4”	825	207	24	50	3.8	1.8	0.1
4-8”	582	174	31	55	1.1	1.2	0.1
8-12”	571	168	57	38	0.6	0.9	0.1

Depth	FCO2	CMIN	SMBC	NMIN	RIN	RSN	RSA
0-4”	343	835	1044	.	16	1	15
4-8”	90	239	374	.	10	1	9
8-12”	48	141	200	.	8	1	7

This study was part of a USDA-NIFA-AFRI funded grant (2013-67019-21369)

Lab #	Nitrate ppm NO3-N	Ammonium ppm NH4-N	Inorg. N ppm N	Total N ppm N	Org. N ppm N	Org. N: Inorg. N	Org. N Rel. ppm N	Org. N Res. ppm N	Avail. N lbs/A	Total P ppm P	Inorg. P ppm PO4-P	Org. P ppm P	Org. P Rel ppm P	Org. P Res. ppm P	Avail. P lbs/A
351	18.4	4.7	23.1	36.9	15.4	0.72	15.4	0.0	69.2	16.1	14.0	2.1	2.1	0.0	36.9
Rank															

	Other Soil Measures					Fertility									
						H3A Extract									
Lab #	Soil pH 1:1	Buffer pH Mod. WDRF	Soluble Salt mmho/cm	Excess Lime	Soil OM % LOI	Potassium ppm K	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Manganese ppm Mn	Iron ppm Fe	Copper ppm Cu	Aluminum ppm Al	Sulfur ppm S
351	6.0	6.5	0.22	NONE	7.5	121	466	92	14	10.82	6.1	129	0.83	155	18.54
Rank															

	Soil Health						Nitrogen Comparison				Reviewer Comments
		H2O Extract									
Lab #	Soil Resp. ppm CO2-C	Org. C ppm C	MAC %	C:N	SHC	Cover Crop Suggestion	Traditional N lbs/A	Haney N lbs/A	Differ. N lbs/A	Savings N $/A	
351	414.1	181	229.3	11.70	28.20	20% Legume 80% Grass	33.1	69.2	36.1	23.10	
Rank											

	Intended		N Credits, lbs/A			Fertility Recommendations, lbs of Required Nutrients per Acre									
Lab #	Crop	Yield Goal	Past Crop	Subsoil	Haney	N	P2O5	K2O	S	Zn	Mg	Fe	Mn	Cu	Lime T/A
351	SOYBEANS BU/A	100	0		69.2	-	45	-	-	-	-	-	-	-	2
351	CORN BU/A	425	0		69.2	395	100	-	-	-	-	-	-	-	-

eviewed By: Emily Shafto
ate: 2/15/2022

Recommendations Provided by Regen Ag Lab, LLC
Analysis Performed by Regen Ag Lab, LLC

egen Ag Lab, LLC
1740 Hwy 10, Pleasanton NE 68866

Gain Ground

308-440-1681
regenaglab.com

Lab #	Nitrogen									Phosphorus					
	H3A Extract			H2O Extract						H3A Extract					
	Nitrate ppm NO3-N	Ammonium ppm NH4-N	Inorg. N ppm N	Total N ppm N	Org. N ppm N	Org. N: Inorg. N	Org. N Rel. ppm N	Org. N Res. ppm N	Avail. N lbs/A	Total P ppm P	Inorg. P ppm PO4-P	Org. P ppm P	Org. P Rel ppm P	Org. P Res. ppm P	Avail. P lbs/A
352	16.8	5.1	21.9	32.0	12.2	0.61	12.2	0.0	61.2	17.0	14.0	3.0	3.0	0.0	39.0
Rank															

Lab #	Other Soil Measures					Fertility									
						H3A Extract									
	Soil pH 1:1	Buffer pH Mod. WDRF	Soluble Salt mmho/cm	Excess Lime	Soil OM % LOI	Potassium ppm K	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Manganese ppm Mn	Iron ppm Fe	Copper ppm Cu	Aluminum ppm Al	Sulfur ppm S
352	5.6	6.3	0.18	NONE	6.4	83	372	82	12	3.20	3.9	110	0.77	165	10.29
Rank															

Lab #	Soil Health						Nitrogen Comparison				Reviewer Comments
		H2O Extract					Traditional N lbs/A	Haney N lbs/A	Differ. N lbs/A	Savings N $/A	
	Soil Resp. ppm CO2-C	Org. C ppm C	MAC %	C:N	SHC	Cover Crop Suggestion					
352	210.5	136	154.6	11.20	19.00	30% Legume 70% Grass	30.2	61.2	31.0	19.84	
Rank											

Lab #	Intended		N Credits, lbs/A			Fertility Recommendations, lbs of Required Nutrients per Acre									
	Crop	Yield Goal	Past Crop	Subsoil	Haney	N	P2O5	K2O	S	Zn	Mg	Fe	Mn	Cu	Lime T/A
352	SOYBEANS BU/A	100	0		61.2	-	45	-	-	-	-	-	-	-	3
352	CORN BU/A	425	0		61.2	405	100	-	36	-	-	-	-	-	3

Reviewed By: Emily Shafto

Date: 2/15/2022

Recommendations Provided by Regen Ag Lab, LLC

Analysis Performed by Regen Ag Lab, LLC

Sample ID all lbs per acre	N lbs per acre	P205 lbs per acre	K20 lbs per acre	Nutrient value per acre		Crop	Yield Goal	lbs N needed	lbs P205 needed	lbs K20 needed	NO3-N Only (traditional testing) lbs per acre	Additional N lbs per acre
Hedrick RF1A 2013	90.69	49.28	153.98	$135.51		Corn	200	109.31	$50.72	0	48.48	
Hedrich RF1A 2014	120.01	64.30	159.90	$212.95	Run	Corn	200	79.99	$35.70	0	44.42	
Hedrick RF1-A 2015	62.7	47.6	125.3	$134.51		Corn	200	137.26	52	0	10.3	
Hedrick RF1-A 2016	77.5	121.2	110.5	$154.50		Corn	200	122.47175	0	0	28.1	
Hedrick RF1A-2017	140.52	118.00	168.50	$156.51		Corn	200	59.48	$0.00	0	48.06	
	Solvita 1-day CO2	Organic C	Organic N	Organic C:N	Soil Health Calculation	Cover crop mix	Total Nitroger	Inorganic N	Organic N	Total Phosph	Inorganic P	Organic P
Hedrick RF1A 2013	101.09	335.50	24.34	13.78	13.12	40% Legume 60% Grass	97.38	48.70	48.68	56.72	37.72	
Hedrich RF1A 2014	113.24	327.56	34.21	9.58	18.52	10% Legume 90% Grass	118.59	50.18	68.41	48.07	41.82	
Hedrick RF1-A 2015	134.6	319.3	26.2	12.2	19.3	30% Legume 70% Grass	67.1	14.8	52.4	47.6	28.1	
Hedrick RF1-A 2016	495.6	280.1	23.0	12.2	54.7	20% Legume 80% Grass	89.6	43.6	46.0	121.2	56.5	
Hedrick RF1A-2017	517.59	325.48	37.50	14.50	57.10	40% Legume 60% Grass	140.52	68.58	71.42	118.00	49.50	

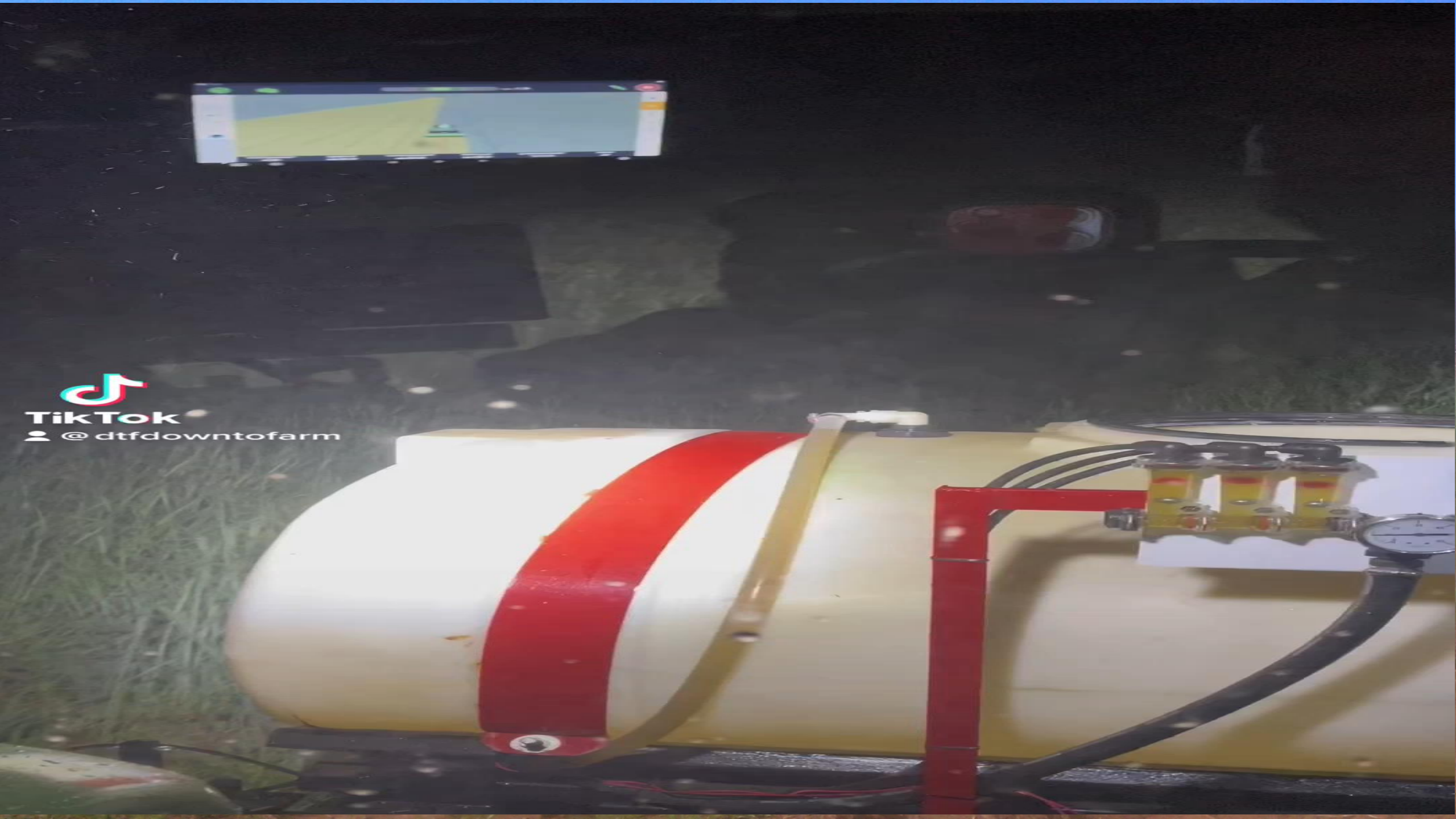
Let me tell you about my Radishes

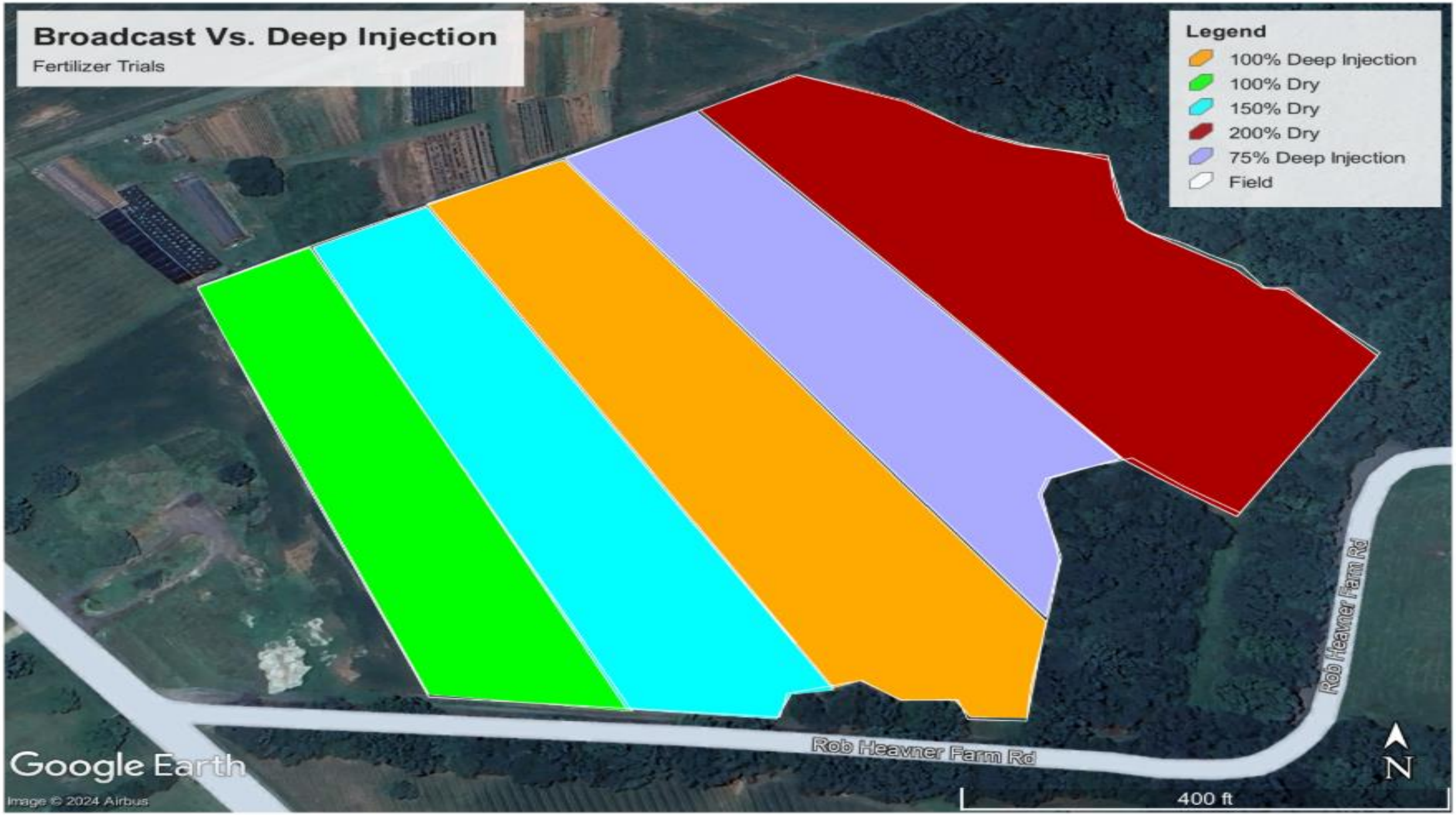

Let me tell you about my corn

How can we enhance Nutrient uptake?

- Phos-Year 1 10%, Year 2 1%- Miller Chemical-Calfa
- Potasium-Citric Acid
- Vermacompost-Fed and Happy- Cheap and Easy
- Holganix-B,F,N,P
- Banding- reduce Soil surface exposure

Deep Banding Yetter 2996


TikTok
@dtfdowntofarm


Broadcast Vs. Deep Injection
Fertilizer Trials
Legend
100% Deep Injection
100% Dry
150% Dry
200% Dry
75% Deep Injection
Field
Rob Heavner Farm Rd
Rob Heavner Farm Rd
Google Earth
Image © 2024 Airbus
N
400 ft

Corn Trials-2024

- Dry fertilizer 100% 135bu
- Dry Fertilizer 150% 152bu
- Dry Fertilizer 200% 168bu
- Dl Fertilizer 100% 219bu
- Dl Fertilizer 75% 193bu
- Dl Fertilizer 50% 176bu


NEW ERA
HAULING
HICKORY, NC
USDOT 3017007 NC
01
Yetter
farm equipment
Yetter
farm equipment

Crimping and Planting

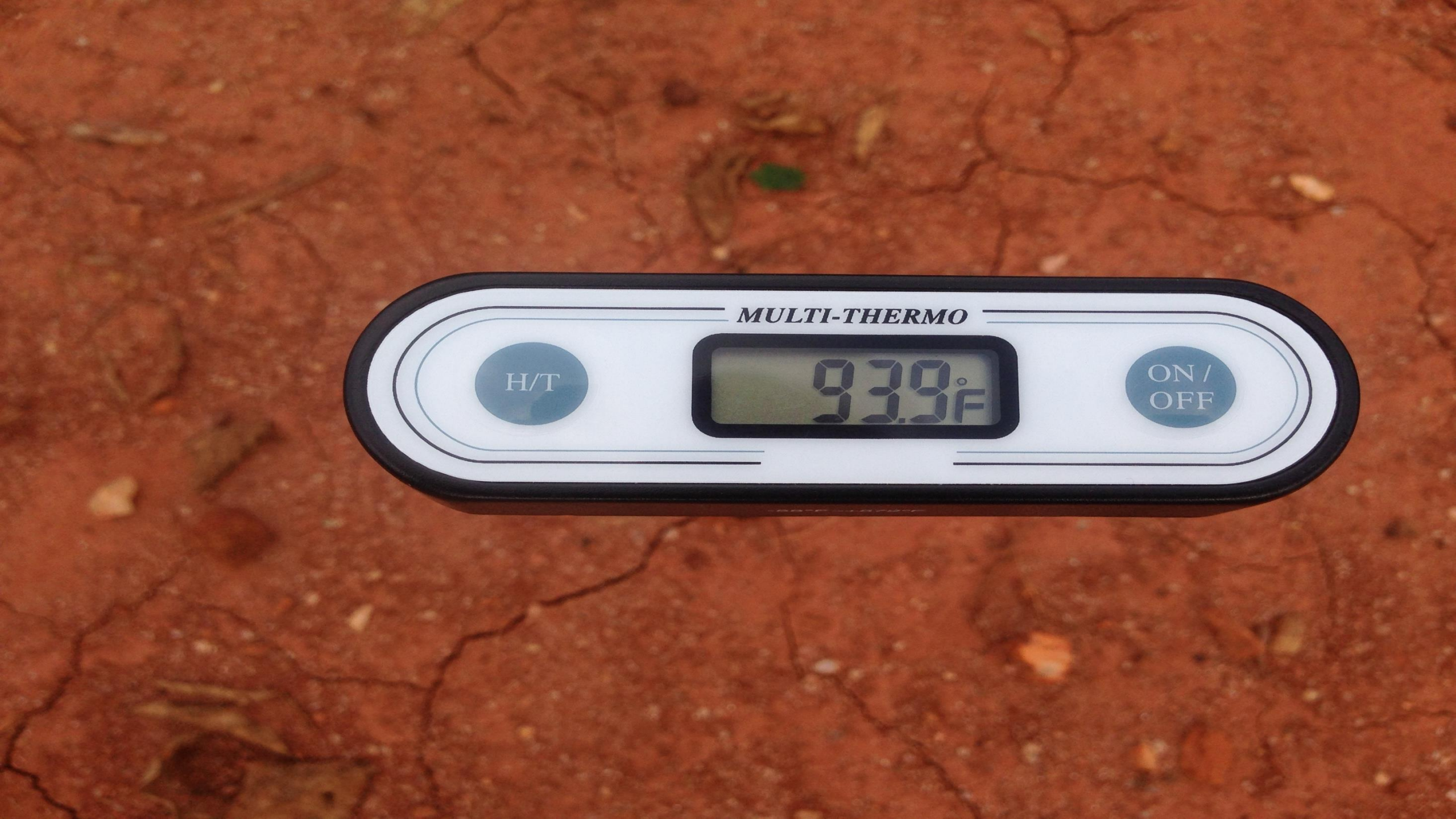

JOHN DEERE

2x2x2 vs 2x2

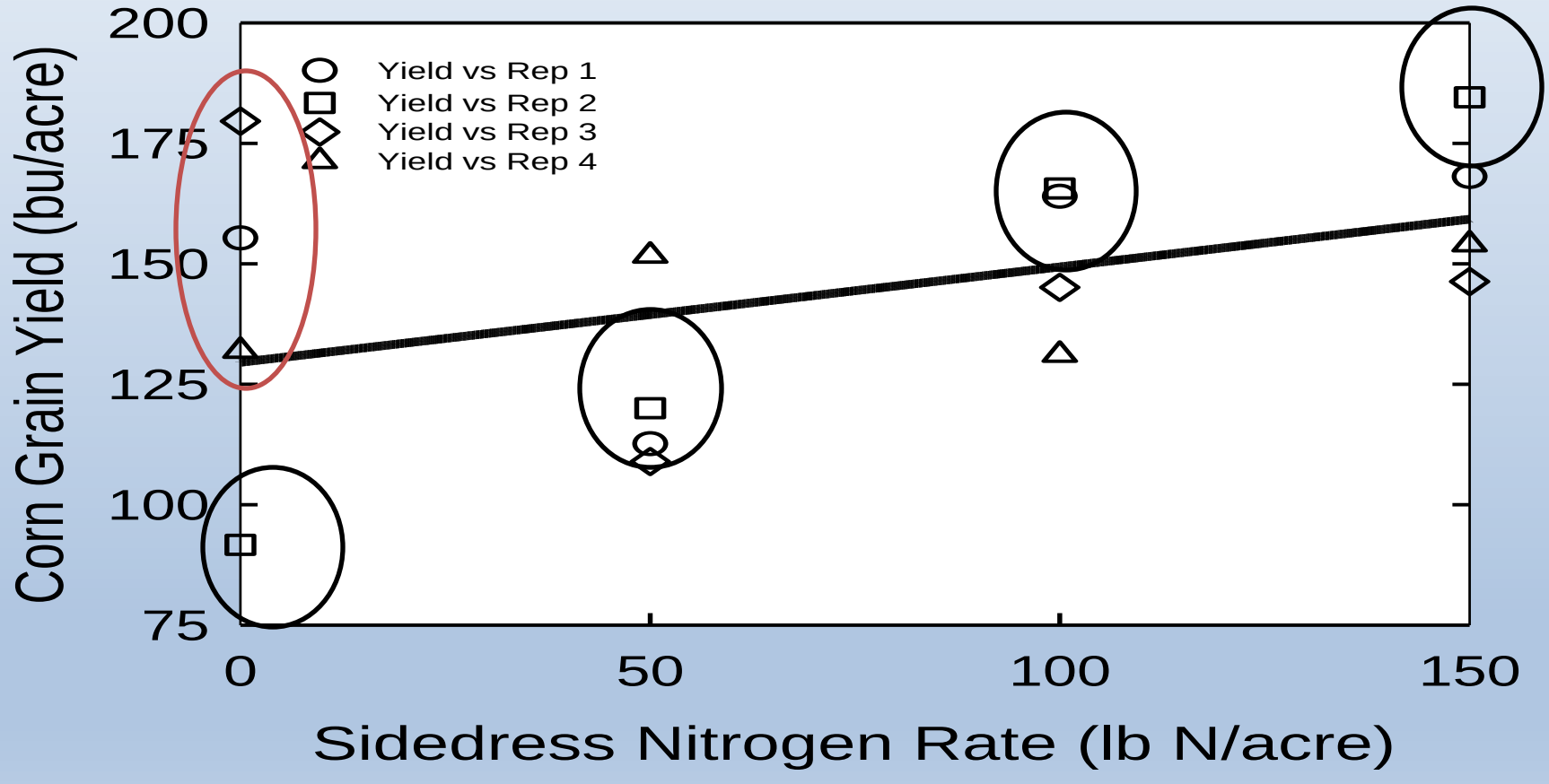
Hol/ES/VC, Hol/ES, Calfa, Just Fertilizer


AGR
MAX
high performance


MULTI-THERMO
H/T
77.2°F
ON / OFF


MULTI-THERMO
H/T
93.9°F
ON / OFF

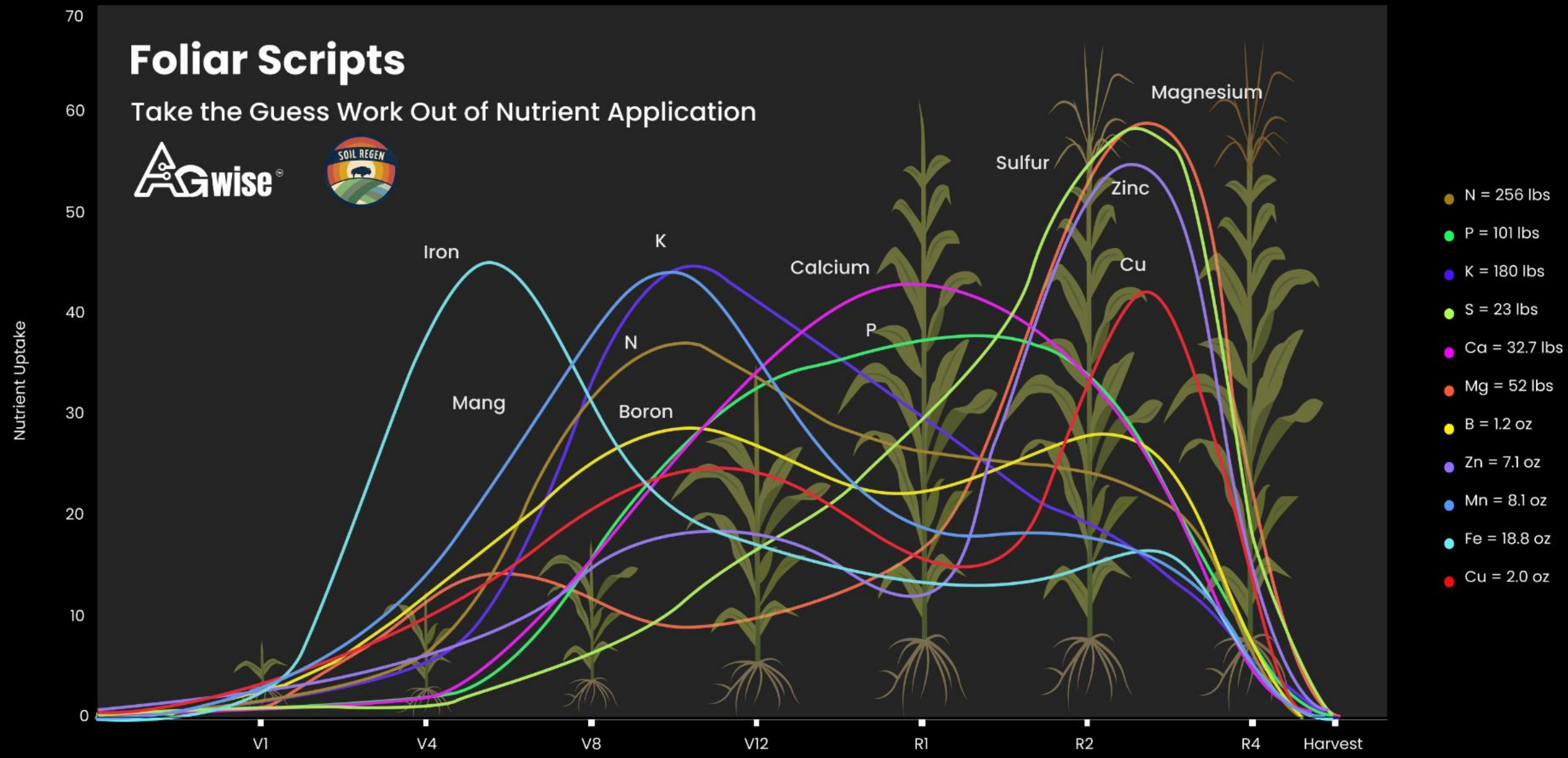
NCSU Corn trials
All Plots Notill Except #2



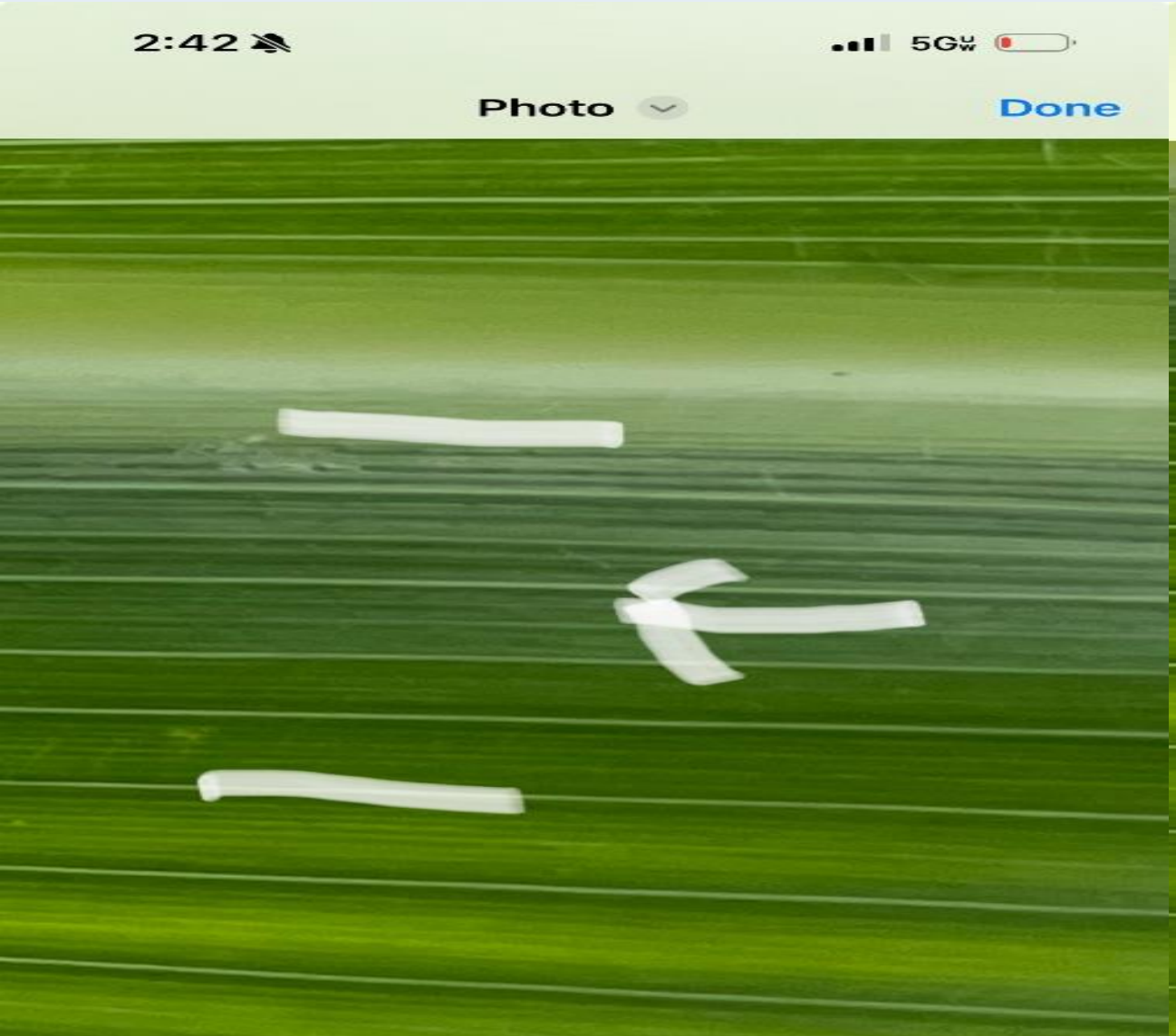

CARHARTT

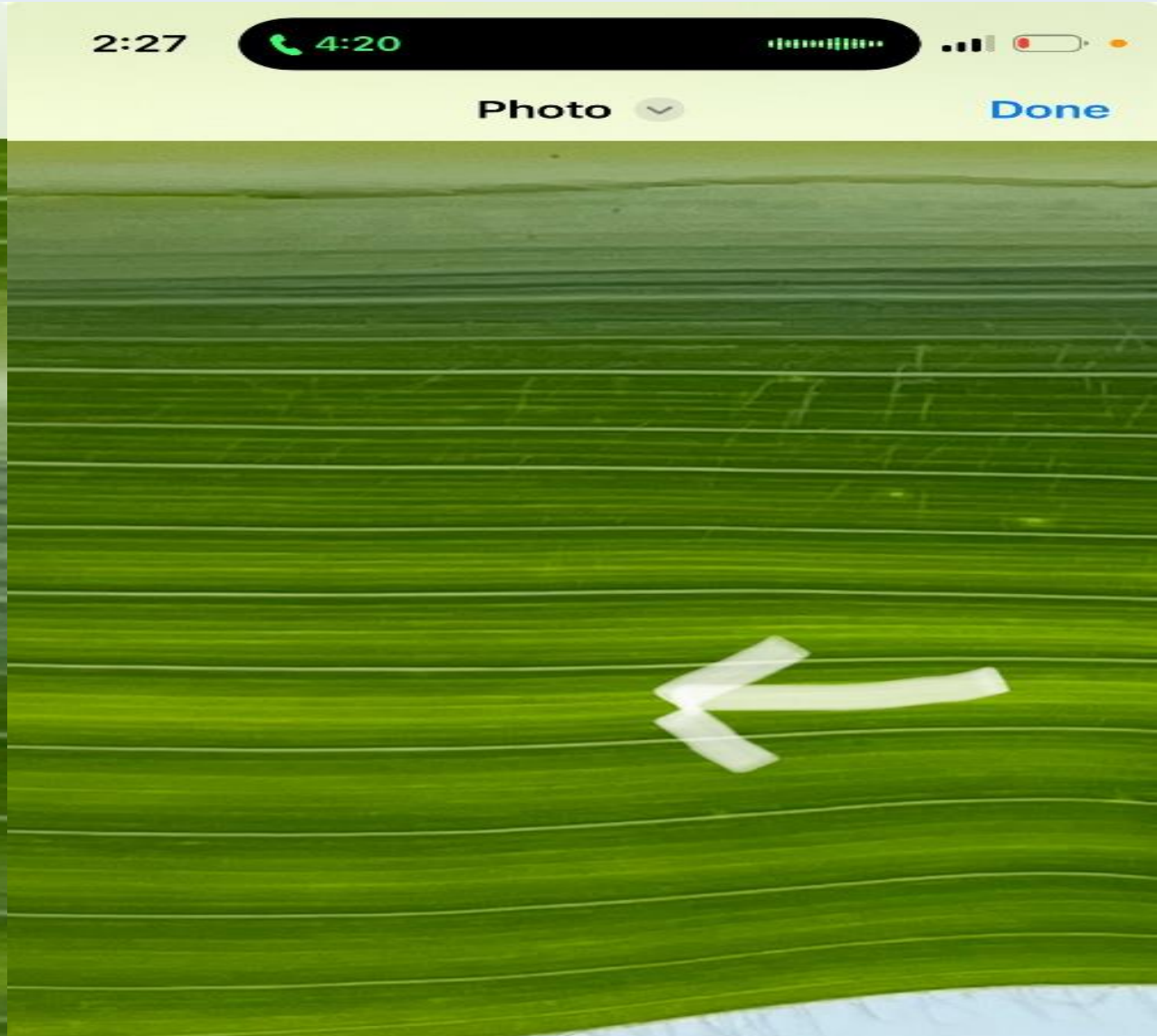

LIBERTY
1995

Keeping them Heavy


Foliar Scripts
Take the Guess Work Out of Nutrient Application
AGwise
SOIL REGEN
Nutrient Uptake
70
60
50
40
30
20
10
0
V1
V4
V8
V12
R1
R2
R4
Harvest
Iron
Mang
K
N
Boron
Calcium
P
Sulfur
Magnesium
Zinc
Cu
N = 256 lbs
P = 101 lbs
K = 180 lbs
S = 23 lbs
Ca = 32.7 lbs
Mg = 52 lbs
B = 1.2 oz
Zn = 7.1 oz
Mn = 8.1 oz
Fe = 18.8 oz
Cu = 2.0 oz

Is sufficient enough? FE3 to FE2





Foliar Script

Information

Name	[redacted]		
Crop	Soybean	**Field**	2802
Stage	R1	**Test Date**	

Recommendation

Sufficient Low

N Nitrogen

Test value 5.47 %

P Phosphorous

Test value 0.51 %

K Potassium

Test value 3.25 %

AA foliar.agwise.io

5:49 5G

B Boron

Test value 29.36 PPM

Concentration(%) 10

0.1 5 10 20 80 100

Application 20.85 Oz

Z Zinc

Test value 37.87 PPM

Concentration(%) 9

0.1 5 10 20 80 100

Application 4.45 Oz

Moly Molybdenum

AA foliar.agwise.io

Foliar Report

transparencywise technology

Name: Russel Hedrick **Plant:** Corn **Test Date:** 05/17/2024

Zip Code: 28601 **Stage:** V3

Nutrient	Value	Ranking	Rate	Amount
Nitrogen	4.20 %	High	0%	0.00 oz
Phosphorus	0.44 %	Sufficient	0%	0.00 oz
Potassium	3.13 %	Deficient	24%	18.00 oz
Calcium	0.60 %	Sufficient	15%	0.00 oz
Magnesium	0.27 %	Sufficient	N/A	N/A
Sulfur	0.41 %	Sufficient	10%	0.00 oz
Sodium	0.01 %	N/A	N/A	N/A
Zinc	48.00 PPM	High	2%	0.00 oz
Iron	178.00 PPM	Sufficient	10%	0.00 oz
Manganese	93.00 PPM	Sufficient	5%	0.00 oz
Copper	12.80 PPM	Sufficient	10%	0.00 oz
Boron	15.57 PPM	High	10%	4.00 oz
Molybdenum	1.30 PPM	High	3%	2.00 oz
Aluminum	62.00 PPM	N/A	N/A	N/A

Developed in Partnership with AG Soil Regen LLC

Corn Critical Timing

- Foliar V3
- Y Drop V4
- Topdress V6-V7
- Tassel-Sulfur
- If you have moisture “Don’t Give up to early”
- We will manage to R5

Actinomycetes %	Actinomycetes B	Gram (-) %	Gram (-) Biomass	Rhizobia %	Protozoan %	Protozoa Biomass
12.33	533.09	16.8	726.64	0	0.64	27.58
Results For	Sample ID 1	Sample ID 2	Total Biomass	Diversity Index	Bacteria %	Total Bacteria Biomass
Russell RF1A		RH NC	4324.82	1.45	53.05	2294.17
Rhizobia Biomass	Total Fungi %	Total Fungi Biomass	Arbusular Mycorrhizal	Arbuscular Mycorrhizal Bior	Saprophytic %	Saprophytes Biomass
0	8.22	355.57	3.8	164.21	4.42	191.36
Fungi:Bacteria	Predator:Prey	Gram(+):Gram(-)	Sat:Unsat	Mono:Poly	Pre 16:1w7c:cy17:0	Pre 18:1w7c:cy19:0
0.155	0.012	2.1573	2.0493	39.0789	NONE FOUND	13.2278
Gram (+) Biomass	Gram (+) %	Undifferentiated %	Undifferentiated Biomass			
1567.54	36.25	38.09	1647.49			

Regen Ag Lab

Date Received:	2/11/2022
Date Reported:	2/15/2022

Address:

City, State, ZIP:

PLFA ANALYSIS REPORT

Lab # 351

	Value	Rank
Total Biomass, PLFA ng/g soil	7021.36	EXCELLENT
Functional Group Diversity Index	1.361	ABOVE AVERAGE

Community Breakdown

Functional Group	Value	Units	% of Total Biomass
Total Bacteria	3887.16	PLFA ng/g	55.36
Gram +	1736.48	PLFA ng/g	24.73
Actinomycetes	772.65	PLFA ng/g	11.00
Gram -	1378.03	PLFA ng/g	19.63
Total Fungi	449.13	PLFA ng/g	6.40
Arbuscular Mycorrhizal	213.13	PLFA ng/g	3.04
Saprophytic	235.99	PLFA ng/g	3.36
Protozoa	13.28	PLFA ng/g	0.19
Undifferentiated	2671.79	PLFA ng/g	38.05

Reviewer Comments

Reviewed By: Emily Shafto
Date: 2/15/2022

Regen Ag Lab, LLC
31740 Hwy 10, Pleasanton NE 68866

Gain Ground

RUSSELL HEDRICK, HICKORY

Balancing C/N Ratios

Here we go again

Haney-Green

Mel 3- Yellow

Red- Haney + Farm program

Haney Vs Mel 3

Here you go Willie

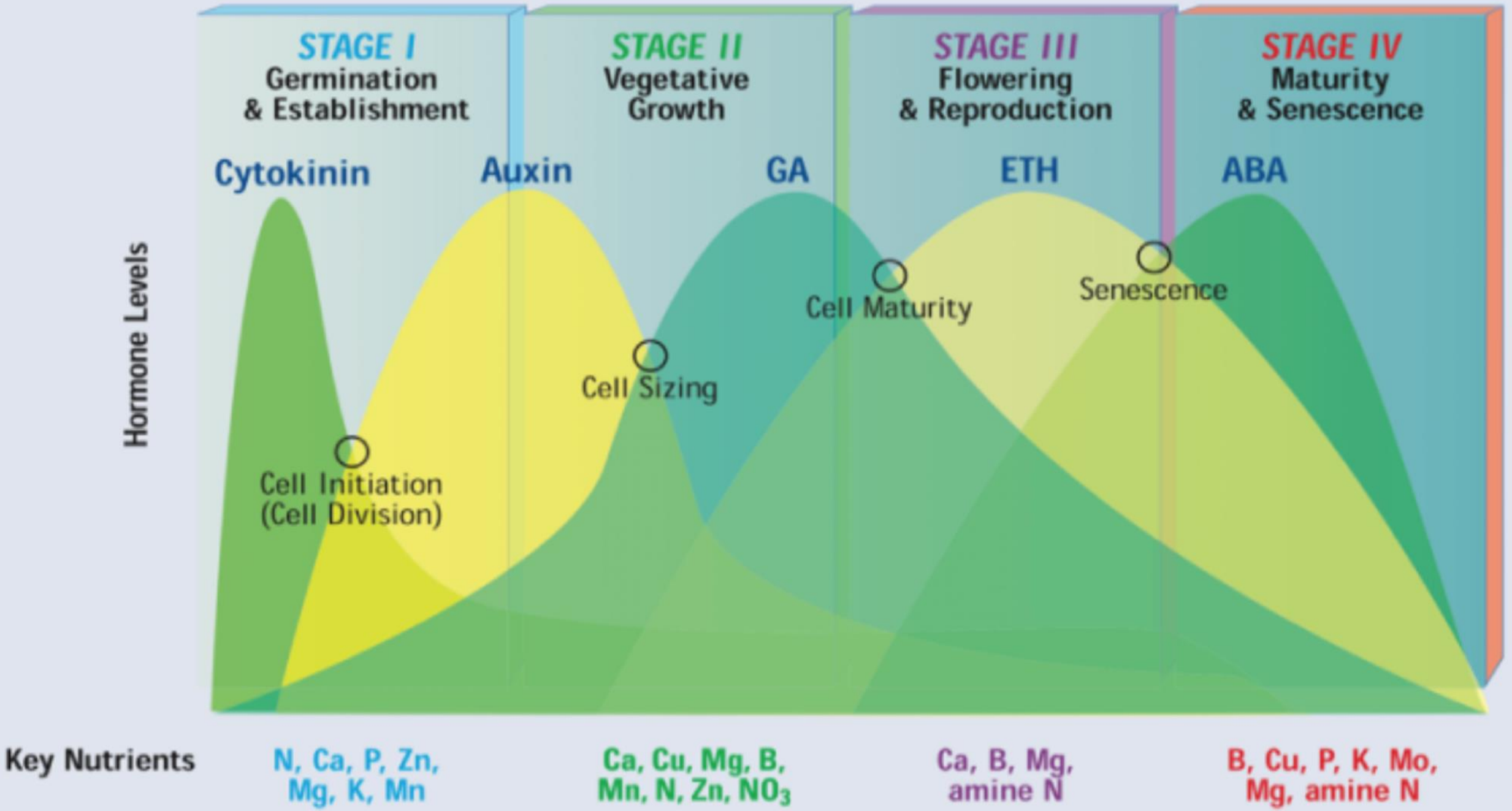
Is Nickle Worth .13 an acre?

Plot yields-$12.85 beans

- Melich 3 plot 37.56 bushels/ac
- Fertilizer applied 22-60-60-9s-.25B
- Map-115lb
- Ams-40lb
- Potash-100lb
- Granubor-1.75lb

- Haney plot 52.47 bushels/ac
- Fertilizer applied 21-70-30-7s-.5B
- Map-135lb
- Ams-30lb
- Potash-50lb
- Granubor-3.5lb
- ROI Over Mel3 $180.12

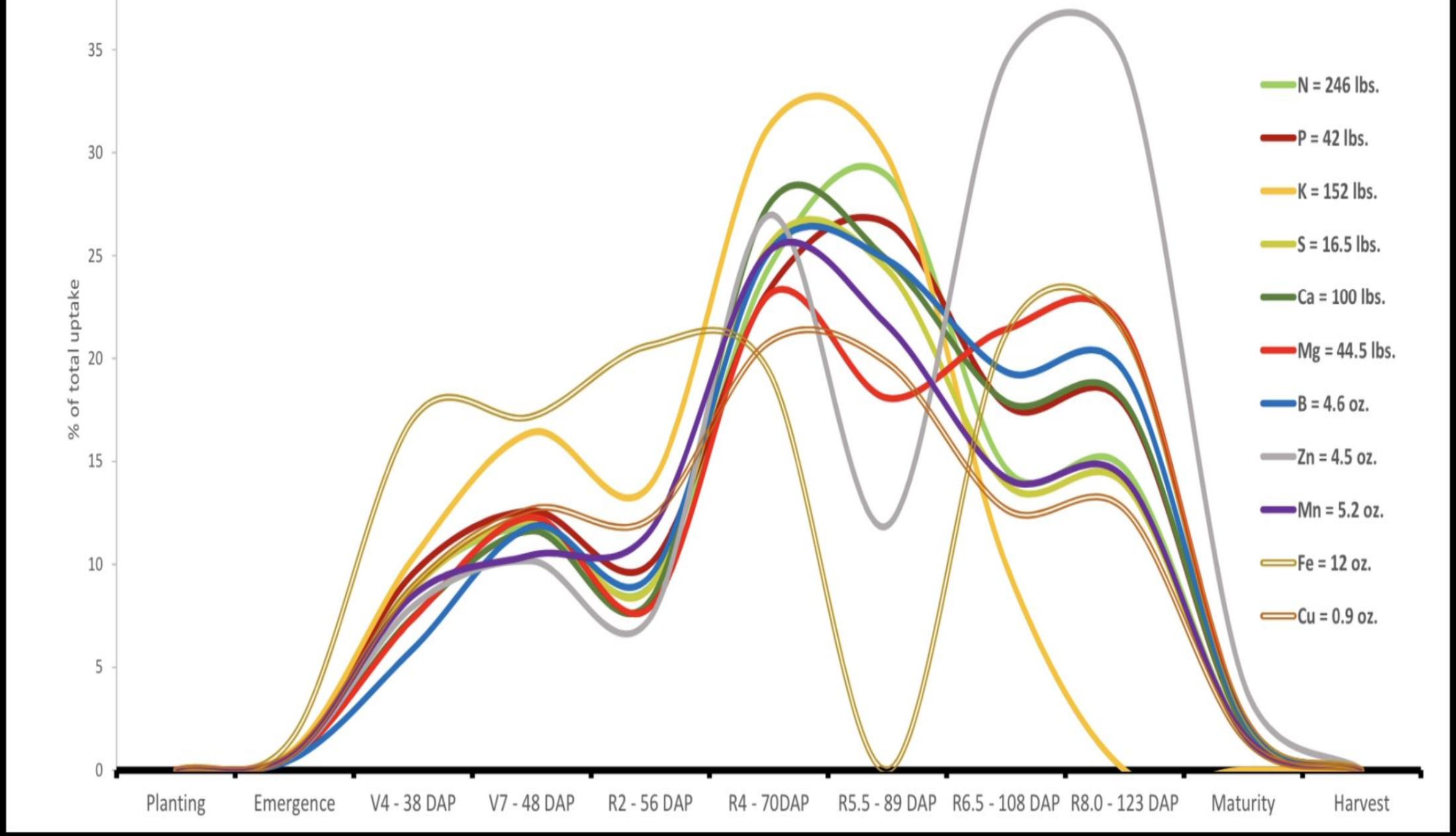
- Haney & Foliar Remaining Field 86.43 bu/ac
- Fertilizer applied
- Pass 1- V4
- 16oz Soysauce
- 16oz sweet success
- 16oz calbor
- 8oz Ensoil algae
- 2oz moly
- 6oz PGR
- Pass 2 R-3
- 32oz Soysauce
- 16oz win sweet soil
- 16oz calbor
- 8oz EnSoil algae
- 2oz Moly
- 4oz PGR
- ROI-$377.53/ac on Farm Package
- ROI over Mel 3-$558.12/ac


STAGE I
Germination
& Establishment
STAGE II
Vegetative
Growth
STAGE III
Flowering
& Reproduction
STAGE IV
Maturity
& Senescence
Cytokinin
Auxin
GA
ETH
ABA
Hormone Levels
Cell Initiation
(Cell Division)
Cell Sizing
Cell Maturity
Senescence
Key Nutrients
N, Ca, P, Zn,
Mg, K, Mn
Ca, Cu, Mg, B,
Mn, N, Zn, NO3
Ca, B, Mg,
amine N
B, Cu, P, K, Mo,
Mg, amine N


AV49A1E. 51 nodes at R-1

July 19th

Aug 19th


% of total uptake
35
30
25
20
15
10
5
0
Planting
Emergence
V4 - 38 DAP
V7 - 48 DAP
R2 - 56 DAP
R4 - 70DAP
R5.5 - 89 DAP
R6.5 - 108 DAP
R8.0 - 123 DAP
Maturity
Harvest
N = 246 lbs.
P = 42 lbs.
K = 152 lbs.
S = 16.5 lbs.
Ca = 100 lbs.
Mg = 44.5 lbs.
B = 4.6 oz.
Zn = 4.5 oz.
Mn = 5.2 oz.
Fe = 12 oz.
Cu = 0.9 oz.

What to Focus on

- 15-1 S, optimum 12-1 or less
- K v4-v6 2.5 and Above R2-R3 3 or Above
- Boron-Tissues are good, Cut your Stems
- Moly- We Doubled what they said was Possible
- Nickle-Flower and Pod Retention R1-R5
- Copper- Pod Elasticity R3-R6
- Zinc R3-R6

Crop Stress

- Nodules become visible shortly after the VE stage, but active N2 fixation does not begin until V2 to V3 stages.
- If you lose Cotyledons before V6 you've cut yield 25%+
- Reducing Ethylene Production in Drought Stress averaged 9.3bu in soybeans and 7.2bu in Corn
- Ethylene-Soil Temps, PGR, Foliars


2841 SEEDS/LB
UNIT
11
TARE
amazonbasics


1736 seeds/lb
UNIT
18
TARE
amazonbasics


1359 seeds/lb
UNIT
29
TARE

Ag Lab

Date Repd: 2/2/2023 City, State, ZIP: SALADO , TX 76571 Sample ID 2: - Sample Depth: 0-6

TOTAL NUTRIENT DIGESTION ANALYSIS REPORT

Lab # 1305

	Nutrient Results		Nutrients, Lbs/A	Fertilizer Equivalent, lbs of Fert*	
Nutrient	**Value**	**Units**	**Value**	**Value**	**Reference Fertilizer**
Carbon	1.96	% C	35280	58800	60% C
Nitrogen	0.166	% N	2988	6496	46-0-0
Phosphorus	0.060	% P	1080	4758	11-52-0 at 22.7% P
Potassium	0.340	% K	6120	11860	0-0-60 at 51.6% K
Calcium	0.210	% Ca	3780	17182	Gypsum-22% Ca
Magnesium	0.470	% Mg	8460	80571	K-Mag-10.5% Mg
Sulfur	0.030	% S	540	2250	AMS-24% S
Zinc	99.80	ppm Zn	179.6	513	ZnSO4-35% Zn
Iron	34070.27	ppm Fe	61326	306632	FeSO4-20% Fe
Manganese	430.02	ppm Mn	774	2497	MnSO4-31% Mn
Copper	35.33	ppm Cu	63.6	254	CuSO4-25% Cu
Boron	22.61	ppm B	40.7	370	Borax-11% B
Sodium	0.020	% Na	360		
Molybdenum	0.05	ppm Mo	0.1	0.2	NaMoO4-39% Mo
Aluminum	32238.00	ppm Al	58028		
C:N Ratio	11.8				

Reviewer Comments

**Lbs of fertilizer needed to be equal to Lbs of soil nutrient/A*

Regen Ag Lab

Date Recd:	1/31/2023	Address:	1181 E CREEKVIEW DR
Date Repd:	2/2/2023	City, State, ZIP:	SALADO , TX 76571

Sample ID 1:	6-12
Sample ID 2:	-
Sample Depth:	6-12

TOTAL NUTRIENT DIGESTION ANALYSIS REPORT

Lab # 1306

	Nutrient Results		Nutrients, Lbs/A	Fertilizer Equivalent, lbs of Fert*	
Nutrient	**Value**	**Units**	**Value**	**Value**	**Reference Fertilizer**
Carbon	1.37	% C	24660	41100	60% C
Nitrogen	0.110	% N	1980	4304	46-0-0
Phosphorus	0.040	% P	720	3172	11-52-0 at 22.7% P
Potassium	0.310	% K	5580	10814	0-0-60 at 51.6% K
Calcium	0.190	% Ca	3420	15545	Gypsum-22% Ca
Magnesium	0.470	% Mg	8460	80571	K-Mag-10.5% Mg
Sulfur	0.020	% S	360	1500	AMS-24% S
Zinc	91.92	ppm Zn	165.5	473	ZnSO4-35% Zn
Iron	37060.32	ppm Fe	66709	333543	FeSO4-20% Fe
Manganese	456.98	ppm Mn	823	2653	MnSO4-31% Mn
Copper	34.94	ppm Cu	62.9	252	CuSO4-25% Cu
Boron	23.52	ppm B	42.3	385	Borax-11% B
Sodium	0.020	% Na	360		
Molybdenum	0.09	ppm Mo	0.2	0.4	NaMoO4-39% Mo
Aluminum	35623.16	ppm Al	64122		
C:N Ratio	12.5				

Reviewer Comments

**Lbs of fertilizer needed to be equal to Lbs of soil nutrient/A*

Top Crop TV Crew

Quesitons

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- Russell@agsoilregen.com