
XTREME
AG·FARM
Kelly Garrett
Arion IA

Regenerative Farming and the benefits of balancing your Soil Health

JBDC Crop Services, LLC / Hansen, Ben / Hoffmann Farm / 55831 Hoffmann

113.3 Acres / 2023: Corn, 2024: Soybeans / 43 Samples On: 10/31/2023

Location: IA / Harrison / Douglas Township / 12-80N-41W ~ Lat/Lng: 41.754366 / -95.571777

P1 (ppm)

P1 (ppm)			
	Min	Max	Acres
	0.0	10.0	31.7
	10.0	15.0	37.0
	15.0	25.0	29.8
	25.0	30.0	6.7
	30.0	2,000.0	8.0

43 sample results for P1		
Minimum	Average	Maximum
1.0	15.3	49.0

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P2 (ppm)

P2 (ppm)			
	Min	Max	Acres
	0.0	10.0	0.0
	10.0	15.0	0.0
	15.0	25.0	0.0
	25.0	30.0	0.0
	30.0	2,000.0	113.2

43 sample results for P2		
Minimum	Average	Maximum
27.0	74.8	139.0

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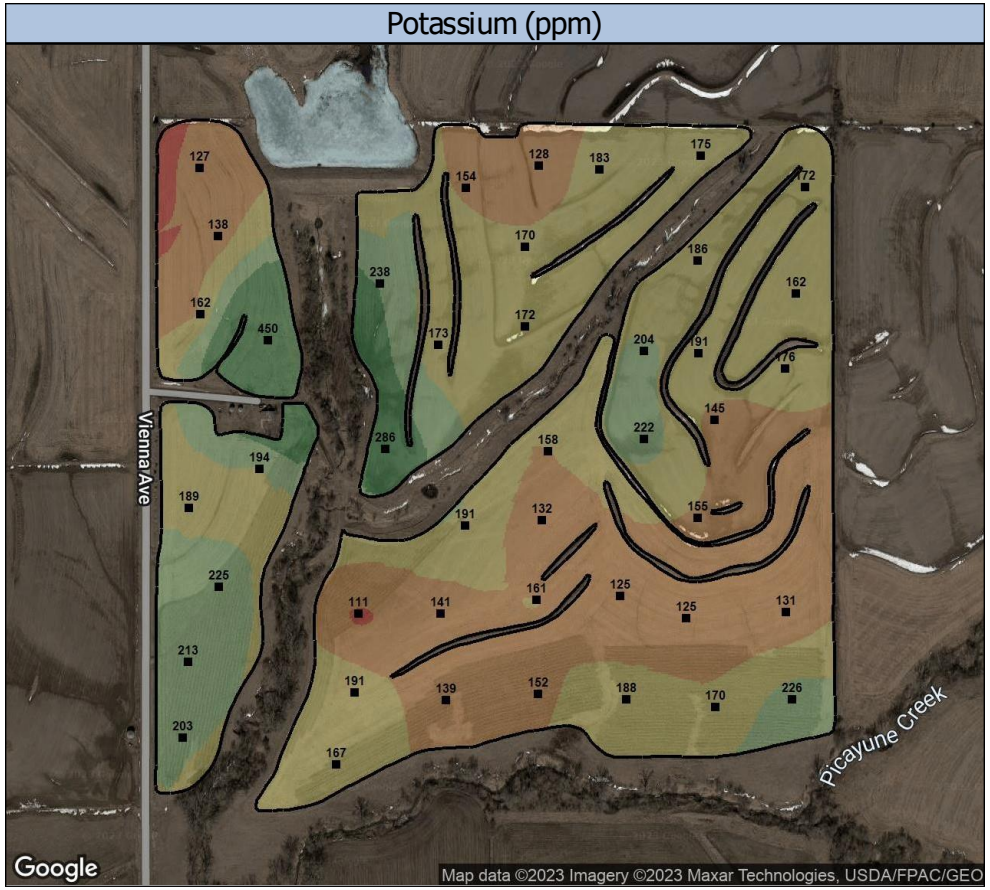
Potassium (ppm)



Potassium (ppm)			
	Min	Max	Acres
	0.0	120.0	1.0
	120.0	160.0	37.9
	160.0	200.0	52.7
	200.0	240.0	15.3
	240.0	2,000.0	6.3

43 sample results for K		
Minimum	Average	Maximum
111.0	179.1	450.0

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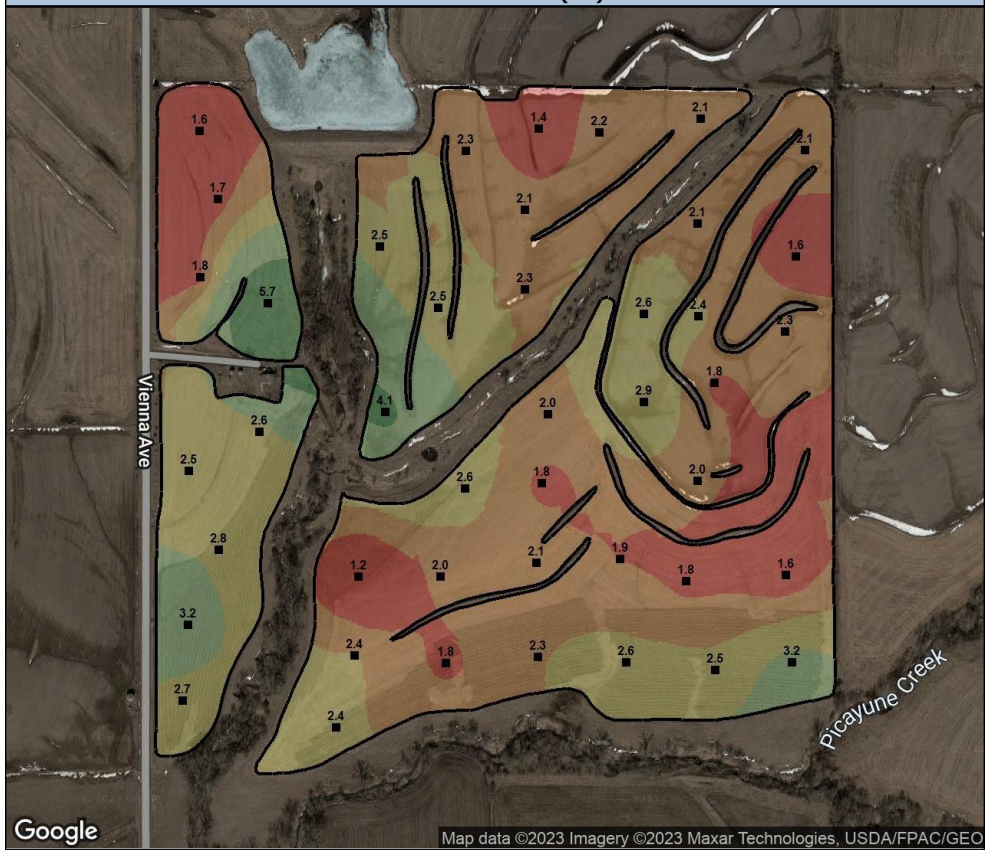
% Potassium (%)



% Potassium (%)			
	Min	Max	Acres
	0.0	1.9	22.0
	1.9	2.3	46.7
	2.3	2.9	32.9
	2.9	3.9	9.1
	3.9	100.0	2.4

43 sample results for PERCENTK		
Minimum	Average	Maximum
1.2	2.3	5.7

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% Magnesium (%)

% Magnesium (%)			
	Min	Max	Acres
	0.0	5.0	0.0
	5.0	10.0	0.2
	10.0	15.0	40.2
	15.0	20.0	48.6
	20.0	100.0	24.3

43 sample results for PERCENTMG		
Minimum	Average	Maximum
9.4	16.9	27.4

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% Calcium (%)

% Calcium (%)			
	Min	Max	Acres
	0.0	30.0	0.0
	30.0	50.0	12.7
	50.0	70.0	54.0
	70.0	90.0	46.5
	90.0	100.0	0.0

43 sample results for PERCENTCA		
Minimum	Average	Maximum
33.4	66.5	88.6

Field 802: Low pH on purpose, LiberateCa in-furrow or foliar always works well here.

NCRS Soil Test Report

Year	Sample Id	%OM	pH	BpH
2022	802	2.2	5.6	6.6
2021	802	2.3	6	6.8
2019	802	2.3	6	6.8

Primary and Secondary Nutrients (ppm)

P1	P2	Bicarb	K	Mg	Ca	Na	S
19	49	0	80	220	1484	8	6
23	40	0	75	216	1429	9	3
13	39		60	189	1361	8	6

CEC & Base Saturation

CEC	%K	%Mg	%Ca	%H	%Na
12.4	1.7	14.8	59.8	23.4	.3
10.8	1.8	16.7	66.2	14.9	0.4
10.1	1.5	15.6	67.4	15.2	.3

Micro Nutrients (ppm)

Zn	Mn	Fe	Cu	B	Al	Cl
.9	3	122	1.5	.3		
0.7	3	113	1.4	0.3		
1	4	129	1.5	.3		

Nitrate N

N ppm	N lbs	depth	Total N
		8	14
6	14	0-8	
5	12	0-8	12

Other

Lime Rate	Sol Salts
	.2
L	0.1
L	.1

Field 1219: Slightly high pH, high CEC, lots of other issues

NCRS Soil Test Report

Year	Sample Id	%OM	pH	BpH
2022	1219	7.6	7.1	7.1
2021	1219	8.5	7.5	7.1
2019	1219	7.8	7.6	

Primary and Secondary Nutrients (ppm)

P1	P2	Bicarb	K	Mg	Ca	Na	S
15	46	17	64	473	2993	7	9
13	48	9	67	445	2782	7	5
17	54	8	95	473	3051	9	6

CEC & Base Saturation

CEC	%K	%Mg	%Ca	%H	%Na
19.1	.9	20.6	78.3	0	.2
17.8	1	20.8	78	0	0.2
19.5	1.2	20.2	78.4		.2

Micro Nutrients (ppm)

Zn	Mn	Fe	Cu	B	Al	Cl
2.2	3	76	1.4	.7		
2	1	60	1	0.5		
1.9	1	54	1	.5		

Nitrate N

N ppm	N lbs	depth	Total N
		8	19
12	29	0-8	
9	22	0-8	22

Other

Lime Rate	Sol Salts
	.3
L	0.2
L	.2

Field 718: good pH, working on P and K

NCRS Soil Test Report

Year	Sample Id	%OM	pH	BpH
2022	718	3.2	6.5	6.8
2020	718	3.1	6.8	7.1
2018	718	2.9	6.7	

Primary and Secondary Nutrients (ppm)

P1	P2	Bicarb	K	Mg	Ca	Na	S
12	55	0	97	382	2210	9	4
8	45	0	96	380	2061	9	5
7	39		95	385	2154	8	4

CEC & Base Saturation

CEC	%K	%Mg	%Ca	%H	%Na
15.7	1.6	20.3	70.4	7.5	.2
13.8	1.8	22.9	75	0	0.3
14.3	1.7	22.4	75.7		.2

Micro Nutrients (ppm)

Zn	Mn	Fe	Cu	B	Al	Cl
1	3	69	1.5	.3		
1	3	58	1.3	0.4		
1.3	3	68	1.5	.6		

Nitrate N

N ppm	N lbs	depth	Total N
		8	14
6	14	0-8	14
9	22	0-8	22

Other

Lime Rate	Sol Salts
	.2
L	0.1
L	.2

Field 1401: slightly higher pH, high calcium

NCRS Soil Test Report

Year	Sample Id	%OM	pH	BpH
2023	1401	4.7	7.5	
2021	1401	6.3	7.5	7.1

Primary and Secondary Nutrients (ppm)

P1	P2	Bicarb	K	Mg	Ca	Na	S
15	65	11	107	313	2752	28	19
15	65	15	91	290	3027	8	7

CEC & Base Saturation

CEC	%K	%Mg	%Ca	%H	%Na
16.8	1.6	15.5	82.2	0	.7
17.8	1.3	13.6	84.9	0	0.2

Micro Nutrients (ppm)

Zn	Mn	Fe	Cu	B	Al	Cl
2.3	3	41	1.6	.5		
3.2	3	58	2.6	0.7		

Nitrate N

N ppm	N lbs	depth	Total N
24	58	8	58
14	34	0-8	

Other

Lime Rate	Sol Salts
	.3
L	0.2

Richards App Sample

date_sampled	7/16/2024	7/9/2024		7/16/2024	7/9/2024	
growth_stage	VT	V14		VT	V14	
new_old	New	New	% diff	Old	Old	% diff
nitrogen_conversion_efficiency	90.7	93.2	-2.68	93	94.9	-2.68
aluminum	1.01	0.05	1920	0.93	0.32	1920
boron	4.34	1.57	176.43	2.79	0.73	176.43
brix	3.1	3.3	-6.06	2.8	2.7	-6.06
calcium	355	279	27.24	561	312	27.24
chloride	421	407	3.44	271	268	3.44
cobalt	0	0	#DIV/0!	0	0	#DIV/0!
copper	7.07	0.29	2337.93	3.97	0.23	2337.93
ec	7.81	7.84	-0.38	5.97	6.99	-0.38
iron	3.99	1.66	140.36	3.02	1.58	140.36
kca_ratio	8.03	10.1	-20.5	4.33	7.31	-20.5
magnesium	238	200	19	254	161	19
manganese	5.78	4.67	23.77	5.6	5.07	23.77
molybdenum	0	0	#DIV/0!	0	0	#DIV/0!
nickel	0	0	#DIV/0!	0.2	0.1	#DIV/0!
nitrogen	820	755	8.61	1,140.00	431	8.61
nitrogen_ammonium	54.6	51.4	6.23	48.7	21.8	6.23
nitrogen_nitrate	21.6	0	#DIV/0!	30.9	0	#DIV/0!
ph	5.98	5.99	-0.17	5.78	5.89	-0.17
phosphorus	197	223	-11.66	143	179	-11.66
potassium	2,850.00	2,810.00	1.42	2,430.00	2,280.00	1.42
selenium	0	0	#DIV/0!	0	0	#DIV/0!
silica	91.4	69.5	31.51	66	63.7	31.51
sodium	7.12	5.45	30.64	7.99	10.2	30.64
sugars	0.81	0.96	-15.63	0.91	0.68	-15.63
sulfur	84.7	97.3	-12.95	143	167	-12.95
zinc	5.95	0.7	750	3.2	0.66	750

REPORT NUMBER
22-098-0077
COMPLETED DATE
Apr 12, 2022
RECEIVED DATE
Apr 8, 2022
ACCOUNT
34820

Midwest Laboratories®

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COPY TO
33083

IDENTIFICATION

TODAY'S DATE
Apr 12, 2022

SOIL ANALYSIS REPORT

INFO SHEET: 1458009

LAB NUMBER *395*	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O.I. percent RATE	PHOSPHORUS P_1 (WEAK BRAY) 1:7 ppm RATE	PHOSPHORUS P_2 (STRONG BRAY) 1:7 ppm RATE	PHOSPHORUS OLSEN BICARBONATE P ppm RATE	NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE) POTASSIUM K ppm RATE	MAGNESIUM Mg ppm RATE	CALCIUM Ca ppm RATE	SODIUM Na ppm RATE	pH SOIL pH 1:1	pH BUFFER INDEX	CATION EXCHANGE CAPACITY C.E.C. meq/100g	PERCENT BASE SATURATION (COMPUTED) % K	% Mg	% Ca	% H	% Na
44496	WITH	4.6 VH	121 VH	135 VH		559 VH	362 VH	2418 H		6.5	6.8	17.8	8.1	16.9	67.9	7.1	
44497	WITHOUT	5.0 VH	51 VH	69 VH		418 VH	410 VH	2733 H		6.8		18.2	5.9	18.8	75.3	0.0	

LAB NUMBER *395*	NITRATE-N (FIA) SURFACE ppm	SURFACE lbs/A	SURFACE depth (in)	SUBSOIL 1 ppm	SUBSOIL 1 lbs/A	SUBSOIL 1 depth (in)	SUBSOIL 2 ppm	SUBSOIL 2 lbs/A	SUBSOIL 2 depth (in)	Total lbs/A	SULFUR S ICAP ppm RATE	ZINC Zn DTPA ppm RATE	MANGANESE Mn DTPA ppm RATE	IRON Fe DTPA ppm RATE	COPPER Cu DTPA ppm RATE	BORON B SORB. DTPA ppm RATE	EXCESS LIME RATE	SOLUBLE SALTS 1:1 mmhos/cm RATE
44496			0-6								41 VH	7.7 VH						
44497			0-6								10 L	4.1 H						

REV.10/17

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Grower ID	Field ID	Zone ID/Grid	Inorganic N
Kelly Garrett - Garrett Land & Cattle	Home Zone 1		65.52
Kelly Garrett - Garrett Land & Cattle	Home Zone 2		66.72
			132.24
Kelly Garrett - Garrett Land & Cattle	Home	0-6	404.32
Kelly Garrett - Garrett Land & Cattle	Home	six - twelve	213.05
Kelly Garrett - Garrett Land & Cattle	Home	twelve-24	157.7
			775.07
Kelly Garrett - Garrett Land & Cattle	Bush Bottom	0-6	232.63
Kelly Garrett - Garrett Land & Cattle	Bush Bottom	six - twelve	254.53
Kelly Garrett - Garrett Land & Cattle	Bush Bottom	twelve-24	174.14
			661.3
Kelly Garrett - Garrett Land & Cattle	Boettgers ZN 1	0-6	66.55
Kelly Garrett - Garrett Land & Cattle	Boettgers ZN 1	six - twelve	60.15
Kelly Garrett - Garrett Land & Cattle	Boettgers ZN 1	twelve-24	52.91
			179.61

BECROP
By BIOMEMAKERS

integrated AG Solutions
2498 Kenwood Rd
Dow City IA, 51528, United States

Microbiome Analysis Report

#CTD004

North

Home

Iowa

SOIL	CROP	VARIETY	DATE
	Soybean	Not defined	30-Dec-2022

All the information shown in this microbial report is based on the detection presence of **585** different species

1e+10 units/gr
Total Bacteria

1e+7 units/gr
Total Fungi

1:243
Arbuscular-Ectomycorrhiza Ratio

1:1765.06
Fungi-Bacterial Ratio

XTREME AG·FARM

BECROP
By BIOMEMAKERS

integrated AG Solutions
2498 Kenwood Rd
Dow City IA, 51528, United States

Microbiome Analysis Report

SOIL	CROP	VARIETY	DATE
	Corn, Maize	Not defined	30-Dec-2022

All the information shown in this microbial report is based on the detection presence of ***498*** different species

1e+10 units/gr
Total Bacteria

1e+7 units/gr
Total Fungi

Only Ectomycorrhiza
Arbuscular-Ectomycorrhiza Ratio

1:2377.05
Fungi-Bacterial Ratio

White Mold

Tar Spot

Before Treatment - 7/9/24

Treatment - 7/12/24

After Treatment - 7/16/24

Treatment:

1 gal/ac - Kapitalize (3-1-8-1S)

48 oz/ac - Pro Germ (9-24-3) Fe+Moly

32 oz/ac - LiberateCa 3% Calcium Sulfate

1 qt/ac - 3% Boron

20 oz/ac - 6% Copper

16 oz/ac - 4% Zinc

16 oz/ac - 4% Iron

1 qt/ac - Backbone

16 oz/ac - Bio Ag E

32 oz/ac - ATP Pump

Thank you!