

Michigan

Monroe and Washtenaw Counties, MI

LAND AUCTION

Farms located near Dundee and Milan, just Northwest of Toledo, OH



- Productive Tillable
- Woods for Hunting
- 2021 Farming Rights
- 1,249± Total Tillable Acres
- Investment Grade Farms
- Development Potential w/Rail Access

TRACT 23

1,436± Acres

Offered in 26 Tracts

Thursday, February 25th • 10

Auction held at The Pinnacle, 1772

SOIL INFORMATION

3% Buyer's Premium

800-451-2709 • SchraderAuction.com

TIMED ONLINE ONLY
 VIRTUAL
 LIVE WITH ONLINE

HESS - TRACT 1

12/21/2015

REPORT NUMBER: 15-351-0357
 ANALYSIS DATE: DEC 21, 2015
 ACCOUNT NO.: 12997

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGE



PAGE: 1/1

REPORT DATE: DEC 21, 2015
 COPY TO: 4432
 AG SPECTRUM

HOWARD HOGE
 AG SPECTRUM
 6957 COUNTY RD M
 DELTA OH
 43515-

GROWER:
 WESTSIDE SERVICE LLC
 11210 WABASH RD
 MILAN MICH 48160

PO BOX 215
 DEWITT IA
 52742-0215

Hess 74

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS		BICARBONATE P OLSEN	POTASSIUM		MAGNESIUM		CALCIUM	SODIUM	pH	pH BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)									
			P1 WEAK BRAY 1:7	P2 STRONG BRAY 1:2		K	Mg	Ca	Na						% K	% Mg	% Ca	% H	% Na					
29332472	H74-1	2.9	M	27	H	93	L	163	H	1894	H	6.3	6.8	12.4	1.9	11.0	76.4	10.7						
29332473	H74-2	2.0	L	19	M	49	VL	120	M	1229	H	6.3	6.8	8.8	1.4	11.4	69.8	17.4						
29332474	H74-3	1.8	L	20	M	37	VL	118	H	1163	H	6.6	7.0	7.3	1.3	13.5	79.7	5.5						
29332475	H74-4	2.0	L	13	L	51	VL	131	M	1487	H	6.3	6.9	9.7	1.3	11.3	76.6	10.8						
29332476	H74-5	2.0	L	21	M	43	VL	90	M	1134	H	6.4	6.9	7.1	1.6	10.6	79.9	7.9						
29332477	H74-6	2.2	L	13	L	60	L	129	M	1428	H	6.1	6.8	9.8	1.6	11.0	72.9	14.5						
29332478	H74-7	2.2	L	15	M	39	VL	127	H	1294	H	6.4	6.9	8.4	1.2	12.6	77.0	9.2						
29332479	H74-8	2.3	L	9	L	57	L	162	H	1489	H	6.5	6.9	9.6	1.5	14.1	77.6	6.8						

Sample ID	Surface		Sub 1		Sub 2		Total	SULFUR S _{ICAP}		ZINC Zn		MANGANESE Mn		IRON Fe		COPPER Cu		BORON B		EXCESS LIME RATE	SOLUBLE SALTS ^{1:1}		
	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN		ppm	lbs/A	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE		ppm	RATE	mmhos/cm
H74-1			0-6																				
H74-2			0-6																				
H74-3			0-6																				
H74-4			0-6																				
H74-5			0-6																				
H74-6			0-6																				
H74-7			0-6																				
H74-8			0-6																				

HESS - TRACT 1

REPORT NUMBER
11-216-0089
 ACCOUNT
12997
 REPORT DATE
Aug 9, 2011
 RECEIVED DATE
Aug 4, 2011



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PAGE 1/1

HOWARD HOGGE
 AG SPECTRUM
 6957 COUNTY RD M
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SOIL ANALYSIS REPORT

Hess 74

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER MODIFIED (CALC. percent)	PHOSPHORUS		BICARBONATE P ppm	POTASSIUM		MAGNESIUM		CALCIUM ppm	SODIUM ppm	SOIL pH	BUFFER INDEX	CATION EXCHANGE CAPACITY (meq/100g)	PERCENT BASE SATURATION (COMPUTED)				
			P (weak Bray) ppm	P (strong Bray) ppm		K ppm	Mg ppm	Ca %	Mg %						Ca %	H %	Na %		
38680	1274-1	2.5	27	61		77	184	2287				6.8		13.2	1.5	11.6	86.9	0.0	
38681	1274-2	1.5	10	26		41	112	1490				6.1	6.8	9.9	1.1	9.4	75.3	14.2	
38682	1274-3	1.6	15	31		28	125	1413				6.7		8.2	0.9	12.7	86.4	0.0	
38683	1274-4	2.2	10	43		48	163	1834				6.2	6.8	12.2	1.0	11.1	75.2	12.7	
38684	1274-5	1.8	26	35		36	83	1201				5.8	6.8	8.4	1.1	8.2	71.5	19.2	
38685	1274-6	2.0	8	35		45	140	1532				5.9	6.7	10.7	1.1	10.9	71.6	16.4	
38686	1274-7	2.0	16	30		34	129	1323				6.0	6.8	9.2	0.9	11.7	71.9	15.5	
38687	1274-8	2.1	10	34		40	158	1665				6.5	6.9	10.5	1.0	12.5	79.3	7.2	

LAB NUMBER	SURFACE		SUBSOIL 1		SUBSOIL 2		SULFUR S ppm	ZINC Zn ppm	MANGANESE Mn ppm	IRON Fe ppm	COPPER Cu ppm	BORON B ppm	EXCESS LAKE SOLUBLE SALTS (mmol/cm)
	depth (ft)	depth (in)	depth (ft)	depth (in)	depth (ft)	depth (in)							
38680	0-6						14	1.5	5	62	1.4	0.6	
38681	0-6						10	1.0	4	46	0.8	0.4	
38682	0-6						11	0.9	4	40	0.6	0.5	
38683	0-6						11	1.2	4	43	1.2	0.4	
38684	0-6						10	0.9	4	43	0.7	0.4	
38685	0-6						10	1.1	5	54	1.2	0.5	
38686	0-6						10	0.9	2	61	0.7	0.3	
38687	0-6						10	1.1	4	40	1.1	0.4	

Our reports and letters *The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.* and letters *analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.* are for our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

HESS - TRACT 1

REPORT NUMBER
08-337-0262
ACCOUNT
12997
REPORT DATE
Dec 4, 2008
RECEIVED DATE
Dec 2, 2008



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Hess 74

SOIL ANALYSIS REPORT

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER Modified LOT Percent	PHOSPHORUS		BICARBONATE P ppm	POTASSIUM		MAGNESIUM Mg ppm	CALCIUM Ca ppm	SODIUM Na ppm	pH	SOIL pH 1:1	BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)			EXCESS SALT RATE	SOLUBLE SALTS 1:1 metho/cm	
			P (Weak Bray) ppm	P (Strong Bray) ppm		K ppm	% K								% Mg	% Ca	% H			% Na
05507	1274-1	2.7	37	70		100	163	1820			6.7			10.7	2.4	12.7	84.9		0.0	
05508	1274-2	1.8	12	36		73	129	1497			6.7			8.7	2.2	12.4	85.4		0.0	
05509	1274-3	1.5	17	34		65	128	1289			6.9			7.7	2.2	13.9	83.9		0.0	
05510	1274-4	2.3	12	42		84	173	1756			6.6			11.1	1.9	13.0	79.1		6.0	
05511	1274-5	1.5	23	34		72	126	1226			5.8			9.1	2.0	11.5	67.4		19.1	
05512	1274-6	1.9	11	34		77	171	1571			5.7			12.0	1.6	11.9	65.5		21.0	
05513	1274-7	2.1	23	43		69	165	1335			6.3			9.2	1.9	14.9	72.6		10.6	
05514	1274-8	2.0	8	26		65	206	1624			6.3			11.2	1.5	15.3	72.5		10.7	

LAB NUMBER	SURFACE			NITRATE-N (FIA)			SULFUR S			ZINC Zn ppm	MANGANESE Mn ppm	IRON Fe ppm	COPPER Cu ppm	BORON B ppm	EXCESS SALT RATE	SOLUBLE SALTS 1:1 metho/cm
	ppm	lbs/A	depth (in)	ppm	lbs/A	depth (in)	ppm	depth (in)	Total lbs/A							
05507			0-6													
05508			0-6													
05509			0-6													
05510			0-6													
05511			0-6													
05512			0-6													
05513			0-6													
05514			0-6													

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive use of the customer and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

TIFF - TRACT 2

Soil Analysis Report

Report To NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	Prepared For GARY HEATH
Report To NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	Sampled / Tested 07-17-2020 07-22-2020 PO# JMEADOWS



Sample Number	Lab Number	Soil pH	pH Buffer	Organic Matter %	Phosphorus P	Potassium K	ANALYSIS Result* and Rating		Calcium Ca	CEC	Base Saturation			Mehlich-3 PPM and Rating			Alum. Al	
							Magnesium Mg	Mg %			K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn		Iron Fe
TIFF	A33530	7.3		0.9	193 V	94 M	139 M	3284 V	13.5	1.5	7.5	91.0						

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

TYLER - TRACT 4,5,6



Nutrien Saline MI 881

9325 W. Michigan Ave
Saline, MI 48176
Office 734-429-2300

Lab Results Map

Soil Sample
2014-12-22

Grower **GARY HEATH / WESTSIDE SERVICE**
Field **Tyler**

Farm **MASTER**

Lab **Spectrum Analytic**
Area **89.45 a**

pH
0 - 6 inch

7.9 none
7.1 $\bar{\bar{}}$ 8.2

BpH
0 - 6 inch

7 none
7 $\bar{\bar{}}$ 7

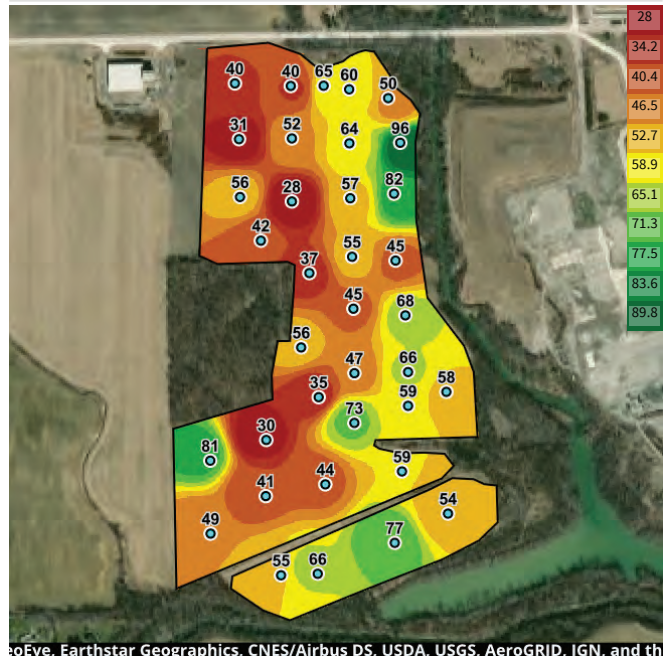
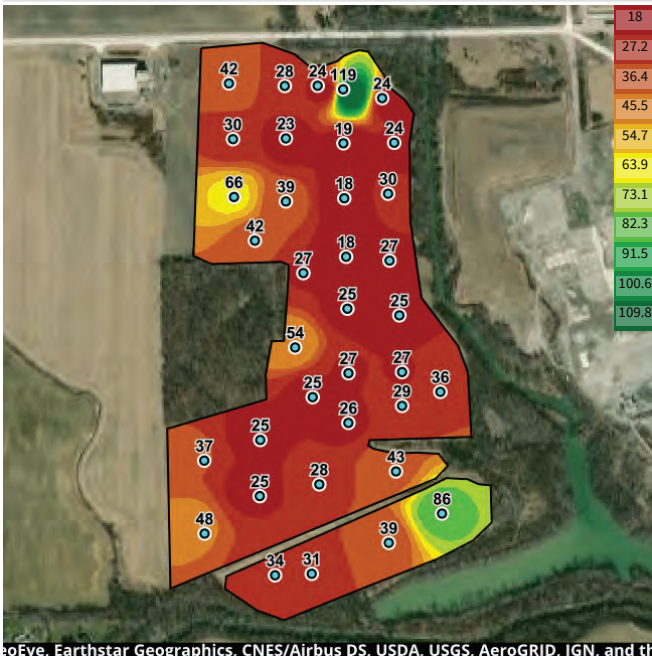


P Phosphorus
0 - 6 inch

35.3 ppm
18 $\bar{\bar{}}$ 119

K Potassium
0 - 6 inch

54.5 ppm
28 $\bar{\bar{}}$ 96



TYLER - TRACT 4,5,6



Nutrien Saline MI 881
 9325 W. Michigan Ave
 Saline, MI 48176
 Office 734-429-2300

Lab Results Map

Soil Sample
 2014-12-22

Grower **GARY HEATH / WESTSIDE SERVICE**
 Field **Tyler W**

Farm **MASTER**

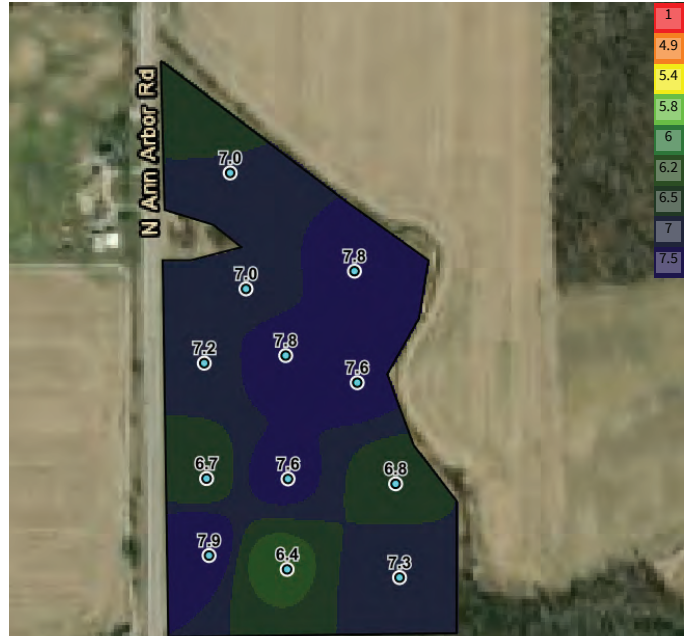
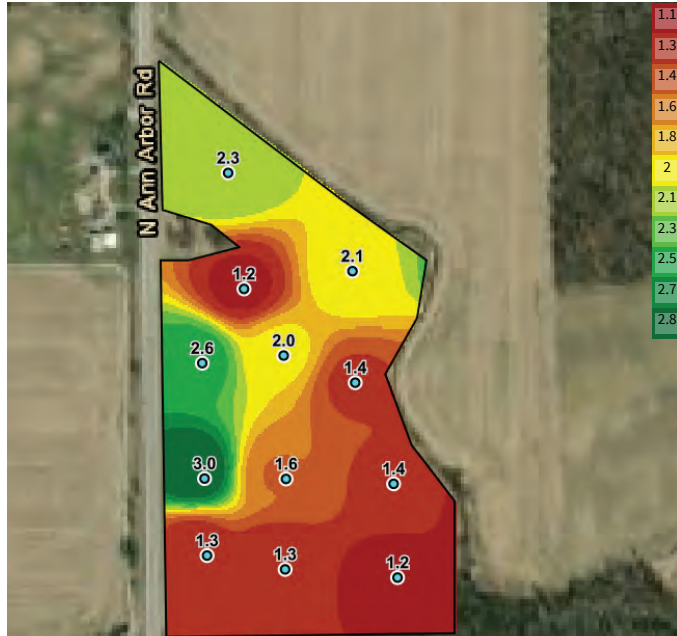
Lab **Spectrum Analytic**
 Area **27.31 a**

OM **Organic Matter**
 0 - 6 inch

1.8 %
 0.5 \bar{x} 4.2

pH **pH**
 0 - 6 inch

7.3 none
 6.4 \bar{x} 7.9

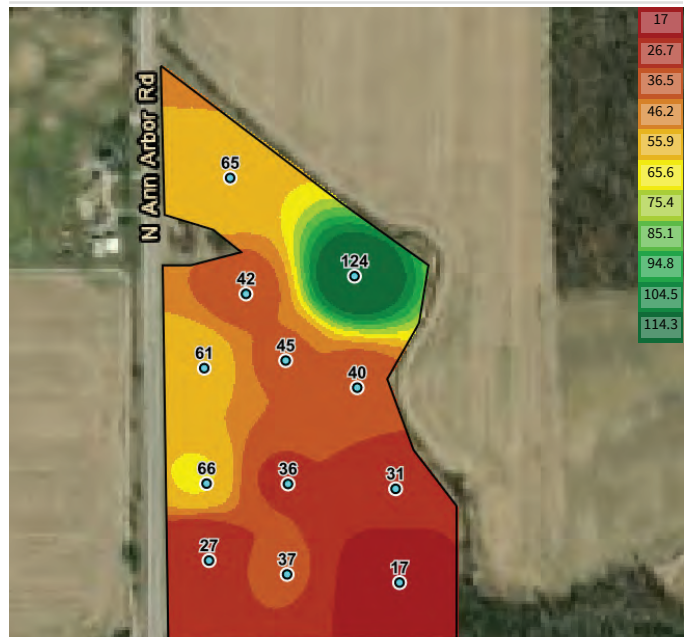


BpH **Buffer pH**
 0 - 6 inch

7 none
 7 \bar{x} 7

P **Phosphorus**
 0 - 6 inch

52.5 ppm
 17 \bar{x} 124



TYLER - TRACT 4,5,6



Nutrien Saline MI 881
9325 W. Michigan Ave
Saline, MI 48176
Office 734-429-2300

Lab Results Map

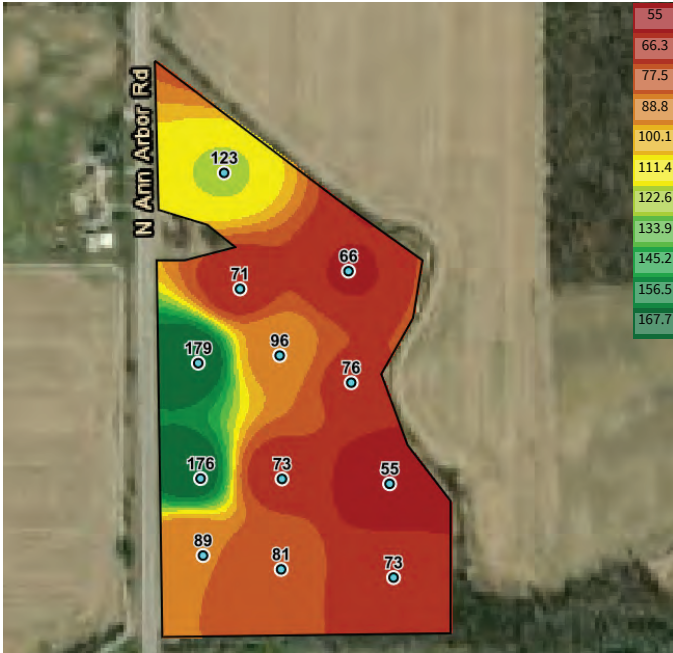
Soil Sample
2014-12-22

Grower **GARY HEATH / WESTSIDE SERVICE**
Field **Tyler W**

Farm **MASTER**

Lab **Spectrum Analytic**
Area **27.31 a**

K Potassium **86.4 ppm**
0 - 6 inch **51** \bar{x} **179**



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TYLER - TRACT 4,5,6

Soil Analysis Report

Report To:
NUTRIEN AG SOLUTIONS INC
 9325 W MICHIGAN AVE
 SALINE, MI 48176

Prepared For:
GARY HEATH
TYLER

Sampled
 06-12-2020
 Tested
 06-17-2020



Sample Number	Lab Number	Soil pH	pH Buffer	Organic Matter %	Analysis Results and Rating			Base Saturation			Mehlich-3 PPM and Rating						
					Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca	CEC	K %	Mg %	Ca %	Zinc Zn	Iron Fe	Copper Cu	Manganese Mn	Aluminum Al
TYLER GOOD	A15117	6.9	7.3	1.0	37 M	69 M	135 M	1452 G	7.7	1.9	12.9	70.7					

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

HATTER - TRACT 9 & 10

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGGE

Page 1 of 3

REPORT NUMBER 13-318-0875

PAGE 1/2

ANALYSIS DATE NOV 18, 2013

REPORT DATE NOV 18, 2013

ACCOUNT NO. 12997

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HOWARD HOGGE
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6957 COUNTY RD M
DELTA OH
43515-

GROWER

WEST SIDE SERVICES LLC

PO BOX 215
DEWITT IA
52742-0215

11210 WABASH RD
MILAN MI 48160

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM (MAGNESIUM)			CALCIUM	SODIUM	pH	CATION EXCHANGE CAPACITY		PERCENT BASE SATURATION (COMPUTED)		
			F ₁	P ₂	P ₃	K	Mg	Ca				Na	meq/100g	% K	% Mg	% Ca
26018171	H-1	1.9	4	VL	5	72	131	2847	VH	15.5	1.2	7.0	91.8			
26018172	H-2	2.2	5	VL	14	79	129	2867	VH	15.6	1.3	6.9	91.8			
26018173	H-3	1.8	13	L	49	84	95	2219	VH	12.1	1.4	6.5	92.1			
26018174	H-4	2.1	11	L	52	103	171	3015	VH	16.8	1.6	8.5	89.9			
26018175	H-5	2.1	21	M	58	78	148	2121	VH	12.0	1.7	10.3	88.0			
26018177	H-6	2.0	13	L	48	71	137	2235	VH	12.5	1.5	9.1	89.4			
26018178	H-7	1.7	24	H	67	88	119	2458	VH	13.5	1.7	7.3	91.0			
26018179	H-8	1.7	11	L	35	92	155	2985	VH	16.5	1.4	7.8	90.8			
26018180	H-9	2.2	17	M	57	78	150	2713	VH	15.0	1.3	8.3	90.4			
26018181	H-10	2.2	14	L	53	96	147	2639	VH	14.7	1.7	8.3	90.0			

Sample ID	SURFACE		Sub 1		Sub 2		SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME		SOLUBLE SALTS	
	ppm	lbs/A	depth	IN	ppm	depth	IN	ppm	depth	IN	ppm	depth	IN	ppm	depth	IN	ppm	depth	IN	mmhos/	cm	RATE
H-1			0-6																			
H-2			0-6																			
H-3			0-6																			
H-4			0-6																			
H-5			0-6																			
H-6			0-6																			
H-7			0-6																			
H-8			0-6																			
H-9			0-6																			
H-10			0-6																			

HATTER - TRACT 9 & 10

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGE

REPORT NUMBER 13-318-0875

ANALYSIS DATE NOV 18, 2013

ACCOUNT NO. 12997

PAGE 2/2

REPORT DATE NOV 18, 2013

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SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM	MAGNESIUM	CALCIUM	SODIUM	pH	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)				
			P ₁ WEIB BRAY 1/7	P ₂ STRONG BRAY 1/7	P BICARBONATE OLSEN							% K	% Ca	% H Na		
26078182	H-11	L.O.I.	PERCENT RATE	ppm	ppm	ppm	ppm	ppm	ppm	meq/100g	%	%	%			
			L	12	38	M	87	L	132	L	2708	VH	14.9	1.5	7.4	97.1
26078183	H-12		M	12	49	H	122	L	168	M	3279	VH	18.1	1.7	7.7	90.6

Sample ID	NITRATE-N (ppm)		SULFUR S _{cap}		ZINC Zn		MANGANESE Mn		IRON Fe		COPPER Cu		BORON B		EXCESS LIME RATE		SOLUBLE SALTS RATE	
	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	mmhos/cm	depth IN	mmhos/cm	depth IN
H-11	0-6																	
H-12	0-6																	

HATTER - TRACT 9 & 10

Soil Analysis Report

Report To:	Prepared For:	Sampled / Tested:
NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	GARY HEATH WESTSIDE SERVICE MASTER	10-25-2017 10-30-2017



Sample Number	Lab Number	Soil pH	Buffer pH	Organic Matter %	Analysis Result and Rating		Calcium Ca	CEC	Base Saturation			Mehlich-3 PPM and Rating				
					Phosphorus P	Potassium K			Magnesium Mg	K %	Mg %	Ca %	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn
HATTER 40-5-1	A17202	7.9		1.0	39 M	128 M	135 M	11.7	2.4	8.5	89.2					
HATTER 40-5-2	A17203	8.0		1.2	19 L	77 M	146 M	10.5	1.6	10.2	88.3					
HATTER 40-5-3	A17204	6.9	7.2	2.0	34 M	146 M	203 G	12.0	2.6	12.4	70.5					
HATTER 40-5-4	A17205	7.4		1.6	21 L	126 M	212 G	11.0	2.5	14.1	83.4					
HATTER 40-5-5	A17206	7.0		2.9	30 M	189 G	225 M	16.1	2.5	10.2	74.2					
HATTER 40-5-6	A17207	7.6		2.1	39 M	211 G	239 M	15.3	3.0	11.5	85.6					
HATTER 40-5-7	A17208	7.6		1.7	26 M	133 M	205 G	11.4	2.5	13.2	84.3					
HATTER 40-5-8	A17209	7.7		0.5	31 M	80 M	117 M	8.7	2.0	9.8	88.2					
HATTER 40-5-9	A17210	7.8		2.3	42 M	141 M	238 G	14.2	2.1	12.3	85.5					
HATTER 40-5-10	A17211	7.8		0.9	125 H	141 M	143 M	13.6	2.2	7.7	90.1					
HATTER 40-5-11	A17212	7.6		1.7	49 G	122 M	270 G	12.3	2.1	16.1	81.7					
HATTER 40-5-12	A17213	7.3		1.2	32 M	77 M	149 G	7.4	2.2	14.8	83.0					
HATTER 40-5-13	A17214	7.1		1.8	52 G	174 M	254 G	15.6	2.4	12.0	76.5					
HATTER 40-5-14	A17215	7.6		1.6	25 M	117 M	235 G	12.6	2.0	13.6	84.4					
HATTER 40-5-15	A17216	7.3		1.2	22 L	74 M	172 G	8.0	2.0	15.8	82.2					
HATTER 40-5-16	A17217	7.1		2.9	29 M	162 M	280 G	16.3	2.1	12.6	76.2					
HATTER 40-5-17	A17218	7.4		2.2	45 G	153 M	289 G	15.5	2.1	13.6	84.2					
HATTER 40-5-18	A17219	7.9		1.0	30 M	97 M	199 G	11.0	1.9	13.2	84.9					
HATTER 40-5-19	A17220	7.9		1.3	58 G	73 M	166 G	9.2	1.7	13.2	85.1					
HATTER 40-5-20	A17221	7.9		0.9	22 L	86 M	155 M	12.2	1.5	9.3	89.1					

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

HATTER - TRACT 9 & 10

MIDWEST LABORATORIES, INC. SOIL REPORT FOR JAMES FRYBARGER

12/31/2018

REPORT NUMBER 18-361-0100

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ANALYSIS DATE DEC 31, 2018

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SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			pH	SOIL BUFFER INDEX	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)		
			P1 WEAK BRAY 1/7	P2 STRONG BRAY 1/7	P3 BICARBONATE P OLSEN	K ppm	Mg ppm	Ca ppm	Na ppm	Rate	Rate	Rate	Rate	Rate	Rate	% K	% Mg				% Ca	% H	% Na
34204342	HA41-1	2.0	L	10	L	37	M	79	L	95	L	2363	VH	12.8	1.6	6.2	92.2						
34204343	HA41-2	2.5	L	15	M	64	VH	102	M	132	M	2125	VH	12.0	2.2	9.2	88.6						
34204344	HA41-3	1.7	L	14	L	51	H	87	L	107	L	2140	VH	11.8	1.9	7.6	90.5						
34204345	HA41-4	1.9	L	6	VL	30	M	81	L	128	M	2271	VH	12.6	1.6	8.5	89.9						
34204346	HA41-5	2.6	M	12	L	45	H	104	M	129	L	2489	VH	13.8	1.9	7.8	90.3						

Sample ID	Surface		Sub 1		Sub 2		SULFUR S ICAP	ZINC Zn	MANGANESE Mn	IRON Fe	BORON B	EXCESS LIME RATE	SOLUBLE SALTS RATE
	ppm	depth IN	ppm	depth IN	ppm	depth IN							
HA41-1		0-8					7						
HA41-2		0-8					6						
HA41-3		0-8					7						
HA41-4		0-8					12						
HA41-5		0-8					9						

HATTER - TRACT 9 & 10

Soil Analysis Report

Report To	Prepared For	Sampled
NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	GARY HEATH WESTSIDE SERVICE MASTER	10-25-2017 10-30-2017



Sample Number	Lab Number	pH	Soil Buffer pH	Organic Matter %	Analysis Results* and Rating			Base Saturation					Mehlich-3 PPM and Rating					
					Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca	CEC	K %	Mg %	Ca %	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al	
HATTER ANTENA-1	A17223	8.0	8.0	1.4	20 L	82 M	140 M	3134 V	13.0	1.4	7.9	90.7						
HATTER ANTENA-2	A17224	8.0	8.0	1.1	25 M	141 M	196 M	3948 V	16.5	1.8	8.7	89.5						
HATTER ANTENA-3	A17225	8.0	8.0	1.7	45 G	145 M	223 M	4363 V	16.9	1.8	9.6	88.5						
HATTER ANTENA-4	A17226	7.9	7.9	1.4	42 M	130 M	180 M	3690 V	15.4	1.8	8.6	89.6						
HATTER ANTENA-5	A17227	7.9	7.9	0.9	38 M	74 L	108 M	3311 V	13.4	1.2	5.9	92.9						
HATTER ANTENA-6	A17228	7.9	7.9	1.3	34 M	106 M	151 M	3197 V	13.3	1.7	8.3	90.0						
HATTER ANTENA-7	A17229	8.1	8.1	1.2	30 M	90 M	142 M	3520 V	14.4	1.3	7.2	91.4						
HATTER ANTENA-8	A17230	8.0	8.0	1.6	19 L	83 M	164 M	2509 V	10.8	1.7	11.1	87.2						
HATTER ANTENA-9	A17231	7.5	7.5	2.0	27 M	163 M	243 G	3306 H	14.5	2.4	12.3	85.3						
HATTER ANTENA-10	A17232	7.7	7.7	1.2	27 M	78 M	138 M	2553 V	10.8	1.6	9.4	89.0						
HATTER ANTENA-11	A17233	7.8	7.8	1.2	24 L	72 M	170 G	2204 H	9.7	1.6	12.9	85.5						
HATTER ANTENA-12	A17234	7.8	7.8	1.4	45 M	97 M	172 G	2394 H	10.4	2.0	12.1	85.9						
HATTER ANTENA-13	A17235	7.8	7.8	0.9	39 M	96 M	187 G	2484 V	10.9	1.9	12.6	85.5						
HATTER ANTENA-14	A17236	7.5	7.5	1.6	21 L	114 M	251 G	2748 V	12.4	2.0	14.9	83.2						
HATTER ANTENA-15	A17237	7.6	7.6	0.9	18 L	73 L	182 G	2523 V	11.0	1.4	12.2	86.4						
HATTER ANTENA-16	A17238	7.7	7.7	1.4	22 L	65 L	165 G	2313 H	10.0	1.4	12.1	86.5						
HATTER ANTENA-17	A17239	7.6	7.6	1.8	12 L	123 M	239 G	2954 H	13.1	2.0	13.4	84.6						
HATTER ANTENA-18	A17240	7.7	7.7	1.8	17 L	133 M	227 M	3278 H	14.2	2.0	11.7	86.3						
HATTER ANTENA-COMPOSITE	FOSEPRZ	7.8	7.8	1.4	28 M	104 M	182 M	3024 V	12.9	1.7	10.4	87.9	9 L	0.6L	2.2 M	194 H	2.5 M	50 M

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

RADKA - TRACT 12

12/31/2018

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SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			BICARBONATE P	POTASSIUM			MAGNESIUM			CALCIUM	SODIUM	pH	CATION EXCHANGE CAPACITY C.E.C.	PERCENT BASE SATURATION (COMPUTED)							
			LOI	P1 WEAK BRAY 1/2	P2 STRONG BRAY 1/2		K	Mg	Ca	Na	SOIL BUFFER INDEX	% K					% Mg	% Ca	% H	% Na				
34204355	RN40-1	2.8	M	12	L	45	H	82	L	187	H	1934	VH		7.2	11.3	1.9	12.3	85.8					
34204357	RN40-2	2.3	L	12	L	36	M	69	L	128	M	1799	VH		7.4	10.2	1.7	10.3	89.0					
34204358	RN40-3	2.0	L	17	M	53	H	55	VL	111	L	2173	VH		7.3	11.9	1.2	7.8	91.0					
34204359	RN40-4	2.8	M	10	L	23	M	97	L	196	M	3256	VH		8.0	18.2	1.4	9.0	89.6					
34204380	RN40-5	2.2	L	19	M	41	H	42	VL	123	H	1347	VH		6.8	7.9	1.4	13.0	85.6					

Sample ID	Surface		Sub 1		Sub 2		Total	SULFUR S		ZINC Zn		MANGANESE Mn		IRON Fe		COPPER Cu		BORON B		EXCESS LIME RATE	SOLUBLE SALTS RATE		
	lbs/A	depth IN	ppm	depth IN	lbs/A	depth IN		ppm	depth IN	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE			mmhos/cm	
RN40-1		0-8						5	VL														
RN40-2		0-8						6	VL														
RN40-3		0-8						7	L														
RN40-4		0-8						7	L														
RN40-5		0-8						5	VL														

OUTLAND PALMER TRACT 14 & 15

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGUE

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LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER Lo.I.	PHOSPHORUS			POTASSIUM/MAGNESIUM/CALCIUM/SODIUM			pH	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)						
			P ₁ WEAK BRAY 1:7	P ₂ STRONG BRAY 1:7	P ₃ BICARBONATE P OLSEH	K	Mg	Ca			Na	% K	% Mg	% Ca	% H	% Na	
26037155	5165-1	2.2	L	23	H	47	H	67	L	108	M	1070	M	1.9	10.1	59.4	28.6
26037157	5165-2	1.7	L	102	VH	114	VH	65	M	61	M	537	M	3.5	10.8	87.1	28.6
26037158	5165-3	1.7	L	53	VH	77	VH	62	L	96	M	740	M	2.5	12.7	58.7	26.1
26037159	5165-4	2.0	L	67	VH	99	VH	104	M	93	M	821	M	3.4	9.9	52.6	34.1
26037160	5165-5	2.2	L	20	M	69	VH	91	L	291	VH	2385	H	1.6	16.6	81.8	
26037161	5165-6	2.1	L	17	M	49	H	104	L	148	M	2887	VH	1.7	7.8	90.5	
26037162	5165-7	1.8	L	19	M	54	H	74	L	169	VH	1290	M	1.9	14.2	65.2	18.7
26037163	5165-8	1.7	L	36	VH	61	VH	66	L	138	H	1240	H	1.9	13.1	70.6	14.5
26037164	5165-9	2.3	L	10	L	58	H	81	L	215	H	2627	VH	1.4	11.9	86.7	
26037165	5165-10	1.9	L	10	L	42	H	82	L	257	VH	2382	VH	1.5	15.0	83.5	

Sample ID	SURFACE		NITRATE-N (ppm)		SULFUR S ICP ppm RATE	ZINC Zn ppm RATE	MANGANESE Mn ppm RATE	IRON Fe ppm RATE	COPPER Cu ppm RATE	BORON B ppm RATE	EXCESS LIME RATE	SOLUBLE SALTS RATE mmhos/cm
	lbs/A	depth IN	Sub 1	Sub 2								
	ppm	depth IN	lbs/A	depth IN								
5165-1	0-6											
5165-2	0-6											
5165-3	0-6											
5165-4	0-6											
5165-5	0-6											
5165-6	0-6											
5165-7	0-6											
5165-8	0-6											
5165-9	0-6											
5165-10	0-6											

OUTLAND PALMER TRACT 14 & 15

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGGE

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LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			pH	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)				
			P ₁ WEAK BRAY 1/7	P ₂ STRONG BRAY 1/7	P ₃ OLSEN	K	Mg	Ca	Na	% K	% Mg	% Ca	% H	% Na										
28037166	5165-11	1.7	L	23	H	68	VH	73	L	143	H	1673	VH	9.7	1.9	12.3	85.8							
28037168	5165-12	2.3	L	11	L	49	H	83	L	261	VH	2101	H	6.9	1.6	15.9	76.7							
28037169	5165-13	1.7	L	27	H	58	H	50	VL	116	H	1064	M	5.8	1.6	12.2	67.3							
28037170	5165-14	2.1	L	25	H	49	H	58	L	151	H	1285	H	5.9	1.6	13.4	88.4							
28037171	5165-15	2.0	L	26	H	58	H	72	L	134	H	1286	H	6.5	2.2	13.5	77.5							
28037172	5165-16	2.3	L	17	M	67	VH	96	L	212	H	2316	VH	6.9	1.8	13.0	85.2							
28037173	5165-17	2.0	L	32	VH	75	VH	89	L	167	M	2060	H	6.2	1.7	10.3	76.3							
28037174	5165-18	3.1	M	10	L	55	H	126	M	238	VH	2243	H	6.3	2.1	13.1	74.3							
28037175	5165-19	3.5	M	12	L	48	H	130	M	292	VH	2642	H	6.8	2.0	14.3	77.7							
28037176	5165-20	2.3	L	23	H	45	H	74	L	134	H	1409	H	6.5	2.1	12.3	77.4							

Sample ID	NITRATE-N (RA)				SULFUR S _{KAP}				ZINC Zn				MANGANESE Mn				IRON Fe				COPPER Cu				BORON B				EXCESS LIME RATE				SOLUBLE SALTS ^{1:1} mmhos/ cm				
	Surface		Sub 1		Sub 2		Total		ppm		depth IN		ppm		depth IN		ppm		depth IN		ppm		depth IN		ppm		depth IN		ppm		depth IN						
	ppm	lbs/A	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN							
5165-11																																					
5165-12																																					
5165-13																																					
5165-14																																					
5165-15																																					
5165-16																																					
5165-17																																					
5165-18																																					
5165-19																																					
5165-20																																					

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LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			pH	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)			
			P ₁ WEAK-BRAY 1:17	P ₂ STRONG-BRAY 1:17	P OLSEN	BICARBONATE	K	Mg	Ca	Na	% K	% Mg	% Ca	% H	% Na	%	%			%	%		
		L.O.I. PERCENT RATE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	meq/100g					
28037177	5165-21	1.5	VL	33	VH	69	VH	74	L	132	H	1523	VH	8.9	2.1	12.4	35.5						
28037178	5165-22	2.1	L	15	M	86	VH	76	L	138	M	2616	VH	1.3	8.0	90.7							
28037179	5165-23	1.5	VL	92	VH	118	VH	82	M	72	M	898	VH	7.7	4.0	11.3	84.7						
28037180	5165-24	1.5	VL	62	VH	72	VH	33	L	18	VL	166	L	5.3	4.7	8.3	46.1						
28037181	5165-25	1.7	L	23	H	61	VH	56	L	139	H	1339	VH	1.8	1.8	14.5	83.7						

Sample ID	Surface		Sub 1		Sub 2		Total		SULFUR			ZINC			MANGANESE			IRON			COPPER			BORON			EXCESS LIME			SOLUBLE SALTS								
	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN		
5165-21			0-6																																			
5165-22			0-6																																			
5165-23			0-6																																			
5165-24			0-6																																			
5165-25			0-6																																			

OUTLAND PALMER TRACT 14 & 15

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGGE

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SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LOI	PHOSPHORUS			POTASSIUM/MAGNESIUM/ CALCIUM			SODIUM			pH		PERCENT BASE SATURATION (COMPUTED)					
			P ₁ MEASUREY L/T	P ₂ STRONG BRAY L/T	BICARBONATE P OLEBA	K ppm	Mg RATE	Ca RATE	Na RATE	Na RATE	SOIL BUFFER pH	INDEX	% K	% Mg	% Ca	% H	% Na		
26037156	5165-1	2.2	L	23	H	47	H	67	L	108	M	1070	M	5.4	6.7	1.9	10.1	59.4	28.6
26037157	5165-2	1.7	L	102	VH	114	VH	65	M	61	M	597	M	5.4	6.8	3.5	10.8	67.1	26.6
26037158	5165-3	1.7	L	53	VH	77	VH	62	L	96	H	740	M	5.5	6.8	2.5	12.7	66.7	26.1
26037159	5165-4	2.0	L	87	VH	99	VH	104	M	93	M	821	M	5.2	6.6	3.4	9.9	52.6	34.1
26037160	5165-5	2.2	L	20	M	69	VH	91	L	291	VH	2395	H	7.3	7.3	14.6	16.8	81.8	
26037161	5165-6	2.1	L	17	M	49	H	104	L	148	M	2887	VH	7.7	7.7	15.9	1.7	7.8	90.5
26037162	5165-7	1.8	L	19	M	54	H	74	L	169	VH	1290	M	5.8	6.7	1.9	14.2	65.2	18.7
26037163	5165-8	1.7	L	36	VH	61	VH	66	L	138	H	1240	H	6.0	6.8	8.8	1.9	13.1	70.5
26037164	5165-9	2.3	L	10	L	58	H	81	L	215	H	2627	VH	7.1	7.1	15.1	1.4	11.9	86.7
26037165	5165-10	1.9	L	10	L	42	H	82	L	257	VH	2382	VH	7.2	7.2	14.3	1.5	15.0	83.5

Sample ID	SURFACE		NITRATE-N (ppm)		SULFUR S		ZINC Zn		MANGANESE Mn		IRON Fe		COPPER Cu		BORON B		EXCESS LIME RATE		SOLUBLE SALTS RATE	
	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN
	lbs/A	depth IN	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2	Sub 1	Sub 2
5165-1	0-6	0-6																		
5165-2	0-6	0-6																		
5165-3	0-6	0-6																		
5165-4	0-6	0-6																		
5165-5	0-6	0-6																		
5165-6	0-6	0-6																		
5165-7	0-6	0-6																		
5165-8	0-6	0-6																		
5165-9	0-6	0-6																		
5165-10	0-6	0-6																		

OUTLAND PALMER TRACT 14 & 15

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGGE

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LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LoI	PHOSPHORUS		POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			pH	SOIL BUFFER pH	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)						
			P ₁ WEAK BRAY 1-7	P ₂ STRONG BRAY 1-7	BICARBONATE P OLSEN	K	Mg	Ca	Na	% K	% Mg	% Ca	% Na	% H	% Na											
26037166	5165-11	1.7	L	23	H	66	VH	73	L	143	H	1673	VH	9.7	1.9	12.3	85.8	1.9	12.3	85.8	5.8	18.9	6.8	11.7	6.0	8.2
26037168	5165-12	2.3	L	11	L	49	H	83	L	261	VH	2101	H	5.6	6.9	15.9	76.7	1.5	15.9	76.7	5.8	18.9	6.8	11.7	6.0	8.2
26037169	5165-13	1.7	L	27	H	55	H	50	VL	116	H	1064	M	7.9	1.6	12.2	87.3	1.6	12.2	87.3	5.8	18.9	6.8	11.7	6.0	8.2
26037170	5165-14	2.1	L	25	H	49	H	58	L	151	H	1285	H	8.3	2.2	13.5	77.5	1.8	13.5	77.5	5.8	18.9	6.8	11.7	6.0	8.2
26037171	5165-15	2.0	L	26	H	58	H	72	L	134	H	1285	H	6.5	6.9	13.6	85.2	1.8	13.6	85.2	5.8	18.9	6.8	11.7	6.0	8.2
26037172	5165-16	2.3	L	17	M	67	VH	96	L	212	H	2316	VH	13.5	1.7	10.3	76.3	1.7	10.3	76.3	5.8	18.9	6.8	11.7	6.0	8.2
26037173	5165-17	2.0	L	32	L	75	VH	88	L	167	H	2060	H	6.2	8.8	15.1	74.3	2.1	13.1	74.3	10.5	17.0	6.0	8.2	8.2	
26037174	5165-18	3.1	M	10	L	55	H	126	M	238	VH	2248	H	8.8	6.6	6.9	8.9	2.0	14.3	77.7	6.0	8.2	8.2	8.2	8.2	
26037175	5165-19	3.5	M	12	L	48	H	130	M	292	VH	2642	H	9.1	2.1	12.3	77.4	2.1	12.3	77.4	6.0	8.2	8.2	8.2	8.2	
26037176	5165-20	2.3	L	23	H	45	H	74	L	134	H	1409	H	6.9	6.9	6.9	8.9	9.1	6.9	8.9	8.2	8.2	8.2	8.2	8.2	8.2

Sample ID	SURFACE		NITRATE-N (ppm)		SULFUR S _{exp}	ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME		SOLUBLE SALTS	
	ppm	depth IN	Sub 1	Sub 2		ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	mmhos/cm	depth IN
	0-6	0-6	lbs/A	depth IN	ppm	depth IN	lbs/A	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	ppm	depth IN	mmhos/cm	depth IN	
5165-11																			
5165-12																			
5165-13																			
5165-14																			
5165-15																			
5165-16																			
5165-17																			
5165-18																			
5165-19																			
5165-20																			

OUTLAND PALMER TRACT 14 & 15

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGGE

REPORT NUMBER 13-319-1001
 ANALYSIS DATE NOV 19, 2013
 ACCOUNT NO. 12997

PAGE 3/3
 REPORT DATE NOV 19, 2013
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 WEST SIDE SERVICES LLC
 11210 WABASH RD
 MILAN MI 48160

PO BOX 215
 DEWITT IA
 52742-0215

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM	MAGNESIUM	CALCIUM	SODIUM	pH		PERCENT BASE SATURATION (COMPUTED)				
			WEAK-BRAY	STRONG-BRAY	BICARBONATE					Na	SOIL BUFFER	INDEX	% K	% Mg	% Ca	% H
		L.O.I.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	1:1	1:1	%	%	%	%	%
26037177	5165-21	1.5	33	69	5	74	132	1523		6.7		2.1	12.4	85.5		
26037178	5165-22	2.1	15	86		76	138	2616		7.7		1.3	8.0	90.7		
26037179	5165-23	1.5	92	118		82	72	898		6.8		4.0	11.3	84.7		
26037180	5165-24	1.5	62	72		38	18	166		5.1		4.7	8.3	46.1		
26037181	5165-25	1.7	23	51		55	139	1339		7.3		1.8	14.5	83.7		

Sample ID	NITRATE-N (ppm)				SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME		SOLUBLE SALTS	
	Surface	depth	depth	depth	lbs/A	depth	ppm	depth	ppm	depth	ppm	depth	ppm	depth	ppm	depth	ppm	depth	depth	depth
	ppm	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN
5165-21		0-6																		
5165-22		0-6																		
5165-23		0-6																		
5165-24		0-6																		
5165-25		0-6																		

FERGUSON - TRACT 17 & 18

Soil Analysis Report

Report To

NUTRIEN AG SOLUTIONS INC
9325 W MICHIGAN AVE
SALINE, MI 48176

Prepared For

GARY HEATH

Sampled
Tested

10-01-2014
10-03-2014



Sample Number	Lab Number	pH		Organic Matter %	Phosphorus P	Potassium K	Analysis Result* and Rating		Base Saturation				Mehlich-3 PPM and Rating														
		Soil pH	Buffer pH				Magnesium mg	Calcium Ca	CEC	K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al								
FERGUSON E	G02618	7.2		1.6	40 M	32 L	170 G	1717 H	8.1	0.8	15.3	79.1	14 M	0.3L	2.3 M										20 M		

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
Ratings: L=Low M=Medium G=Good H=High V=Very High

HIID:0010-0640-7211-0003

Analyzed by Spectrum Analytic Inc.
www.spectrumanalytic.com

FERGUSON - TRACT 17 & 18

Soil Fertility Recommendations

Report To
 NUTRIEN AG SOLUTIONS INC
 9325 W MICHIGAN AVE
 SALINE, MI 48176

Prepared For
 GARY HEATH

Sampled
 Tested
 10-01-2014
 10-03-2014



Sample Number	Lab Number	Year	Crop	Yield Goal	Acres	CaCO3** Lime	Nutrient recommendations expressed in broadcast rates of lbs/A except where noted.										
							N	P205	K2O	Mg	S	B	Cu	Fe Foliar	Mn Row	Zn	
FERGUSON E	G02618	15	Corn	150 bu		0	144	98	200	10	16	0.50				2	7

** Lime expressed in 100% pure CaCO3. Adjust accordingly.
 D = Dolomitic Lime C = Calcitic Lime

Corn: Starter fertilizer is normally suggested regardless of soil test levels. Monitor and adjust nutrient program based on annual leaf analysis.

FERGUSON - TRACT 17 & 18

Soil Analysis Report

Report To
NUTRIEN AG SOLUTIONS INC
 9325 W MICHIGAN AVE
 SALINE, MI 48176

Prepared For
GARY HEATH

Sampled
 10-01-2014
 Tested
 10-03-2014



Sample Number	Lab Number	pH		Organic Matter %	Phosphorus P	Potassium K	Analysis Result* and Rating		Calcium Ca	CEC	Base Saturation			Mehlich-3 PPM and Rating									
		Soil pH	Buffer pH				Mg %	K %			Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al					
FERGUSON W	G02619	6.6	7.0	1.8	43 M	51 L	191 G	1201 G	7.5	1.5	18.6	59.9	13 M	0.3L	1.8 M							20 G	

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

FERGUSON - TRACT 17 & 18

Soil Fertility Recommendations

Report To	Prepared For	Sampled / Tested
NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	GARY HEATH	10-01-2014 10-03-2014

Report To	Prepared For
NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	GARY HEATH

Report To	Prepared For
NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	GARY HEATH



Sample Number	Lab Number	Year	Crop	Yield Goal	Acres	Nutrient recommendations expressed in broadcast rates of lbs/A except where noted.											
						CaCO3** Lime	N	P2O5	K2O	Mg	S	B	Cu	Fe Foliar	Mn Row	Zn	
FERGUSON W	G02619	15	Corn	150 bu		0	142	93	192	0	16	0.50				0	8

** Lime expressed in 100% pure CaCO3. Adjust accordingly.
D = Dolomitic Lime C = Calcitic Lime

Corn: Starter fertilizer is normally suggested regardless of soil test levels. Monitor and adjust nutrient program based on annual leaf analysis.

FERGUSON - TRACT 17 & 18



Nutrien Saline MI 881
 9325 W. Michigan Ave
 Saline, MI 48176
 Office 734-429-2300

Lab Results Map

Soil Sample
 2014-11-14

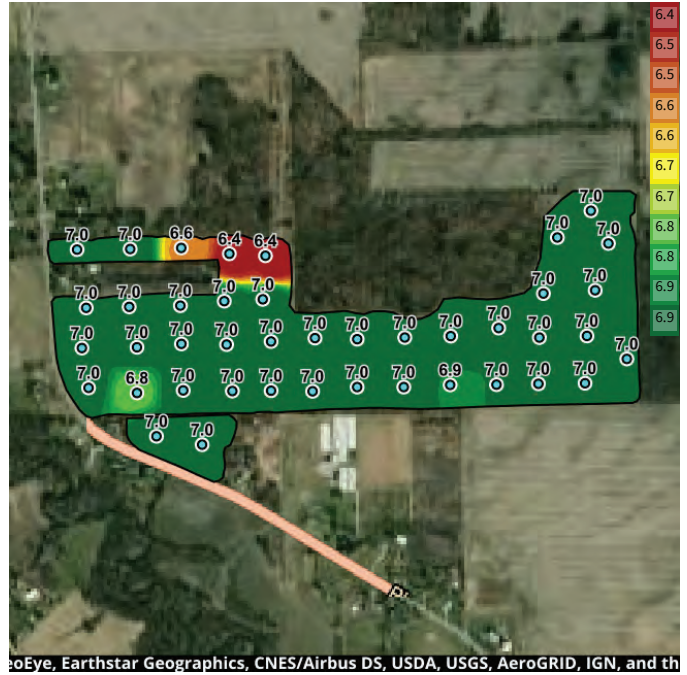
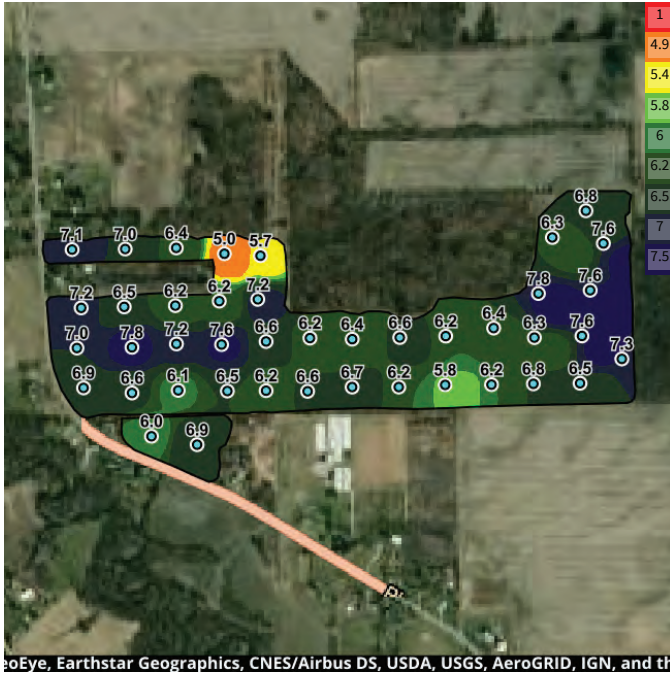
Grower **GARY HEATH / WESTSIDE SERVICE**
 Field **Ferguson**

Farm **MASTER**

Lab **Spectrum Analytic**
 Area **105.6 a**

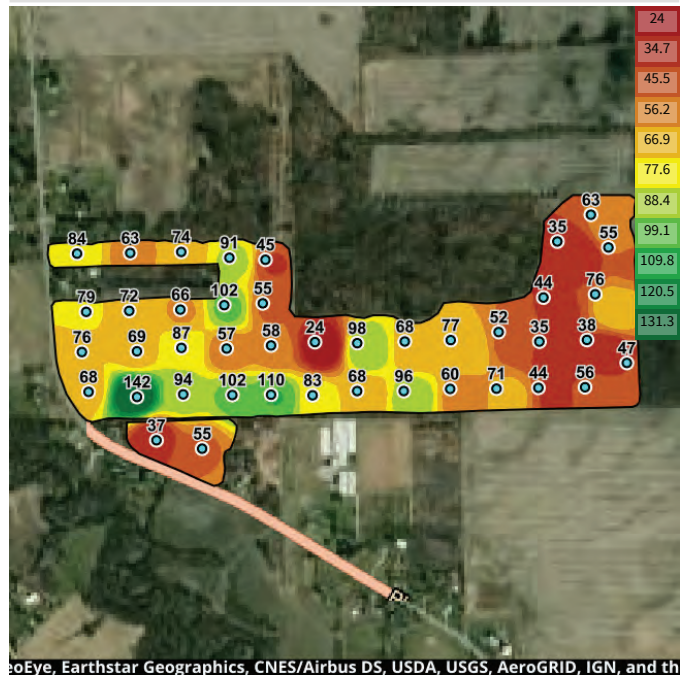
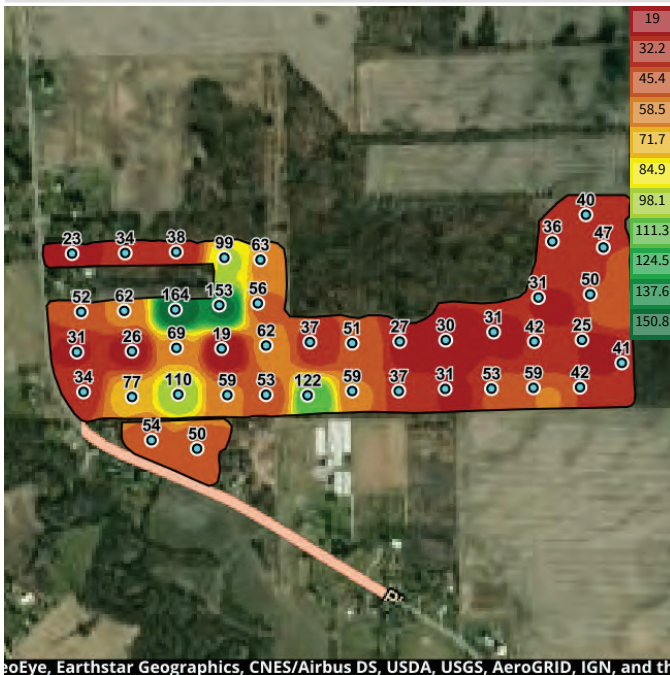
pH
 0 - 6 inch
6.7 none
 5 $\bar{\bar{}}$ 7.8

Buffer pH
 0 - 6 inch
7 none
 6.4 $\bar{\bar{}}$ 7



P Phosphorus
 0 - 6 inch
54.3 ppm
 19 $\bar{\bar{}}$ 164

K Potassium
 0 - 6 inch
68.5 ppm
 24 $\bar{\bar{}}$ 142



BARNES - TRACT 19

12/31/2018

MIDWEST LABORATORIES, INC. SOIL REPORT FOR JAMES FRYBARGER

REPORT NUMBER 18-361-0101

PAGE 1/1

ANALYSIS DATE DEC 31, 2018

REPORT DATE DEC 31, 2018

ACCOUNT NO. 4415

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FRANKENMUTH MI
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11210 WABASH RD
MILAN MICH 48160

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52742-0215

GROWER

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER Lo.I.	PHOSPHORUS				POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		pH	SOIL BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPLETED)			
			P ₁ WEAK BRAY 1/2	P ₂ STRONG BRAY 1/2	P ₂ CLSEN	BICARBONATE P	K	Mg	Ca	Na	% K	% Mg	% Ca	% H				% Na			
34204347	BF74-1	2.3	L	56	VH	107	VH	51	VL	103	M	398	M	5.5	6.7	8.0	1.5	10.7	61.8	25.9	
34204348	BF74-2	2.0	L	38	VH	76	VH	39	VL	91	M	984	H	5.8	6.8	7.2	1.4	10.5	68.3	19.8	
34204349	BF74-3	2.5	L	47	VH	95	VH	51	VL	150	H	1558	H	6.4	6.9	10.1	1.3	12.4	77.5	8.7	
34204350	BF74-4	2.0	L	42	VH	84	VH	42	VL	69	L	965	L	5.9	6.8	6.6	1.6	8.7	73.1	16.6	
34204351	BF74-5	2.3	L	46	VH	82	VH	51	VL	154	H	1267	H	6.3	6.9	8.6	1.5	14.9	73.7	9.9	
34204352	BF74-6	1.9	L	78	VH	126	VH	71	L	98	M	924	M	5.7	6.8	7.1	2.6	11.5	66.1	20.8	
34204353	BF74-7	2.3	L	50	VH	96	VH	59	L	119	M	1305	H	6.2	6.9	8.7	1.7	11.4	75.0	11.8	
34204354	BF74-8	2.4	L	46	VH	89	VH	50	VL	116	M	1447	H	6.2	6.8	9.4	1.4	10.3	77.0	11.3	
34204355	BF74-9	2.3	L	47	VH	89	VH	62	L	135	M	1491	H	6.2	6.8	9.9	1.5	11.4	75.3	11.7	

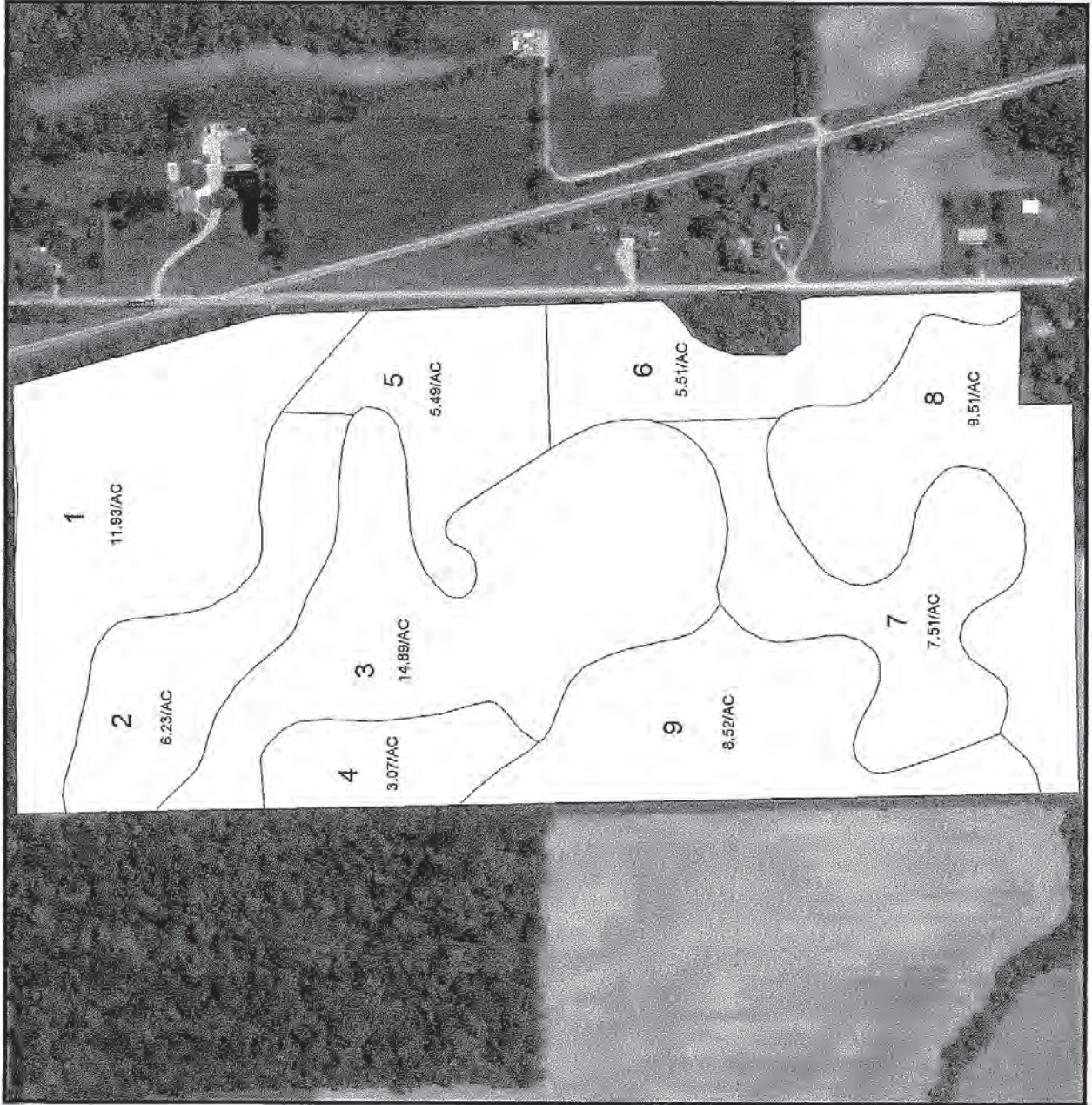
Sample ID	Surface		Sub 1		Sub 2		Total		DTPN Extraction				SOLUBLE SALTS mmhos/cm						
	ppm	lbs/A	depth IN	ppm	depth IN	ppm	depth IN	ppm	lbs/A	S	Zn	Mn		Fe	B	Cu	IRON	BORON	EXCESS LIME RATE
BF74-1			0-8				7	L											
BF74-2			0-8				6	VL											
BF74-3			0-8				6	VL											
BF74-4			0-8				8	VL											
BF74-5			0-8				6	VL											
BF74-6			0-8				8	L											
BF74-7			0-8				6	VL											
BF74-8			0-8				6	VL											
BF74-9			0-8				7	L											

BARNES - TRACT 19

Barns Farm 74 AREASYMBOL

MI1115

Client: Grower
Farm: Barns Farm 74
Field: Barns Farm 74
Name: soilmu_a_mi1115



BARNES - TRACT 19

11/22/2015

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGUE

REPORT NUMBER 15-315-1339
 ANALYSIS DATE NOV 16, 2015
 ACCOUNT NO. 12997



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GROWER
 WESTSIDE SERVICE LLC

11210 WABASH RD
 MILAN MICH 48160

PO BOX 215
 DEWITTIA
 52742-0215

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS			POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			pH	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)		
			P1	P2	P	K	Mg	Ca	Na	% K	% Mg	% Ca	% H	% Na								
29057452	BF74-1	2.0	41	79	VH	57	142	VH	111	H	6.4	6.9	7.6	1.9	15.6	73.1	9.4					
29057453	BF74-2	2.0	64	97	VH	53	97	M	1062	M	5.6	6.7	8.2	1.7	9.9	64.8	23.6					
29057454	BF74-3	2.0	40	VH	63	VH	41	VH	1376	H	6.0	6.8	9.2	1.1	9.1	74.8	15.0					
29057455	BF74-4	1.8	58	VH	76	VH	71	L	896	M	5.4	6.7	7.3	2.5	7.9	61.3	28.3					
29057456	BF74-5	2.0	45	VH	59	VH	51	VH	1034	M	5.8	6.8	7.9	1.7	13.5	65.4	19.4					
29057457	BF74-6	1.8	61	VH	91	VH	79	L	821	M	5.5	6.7	6.9	2.9	11.7	59.5	25.9					
29057458	BF74-7	2.2	54	VH	68	VH	80	L	109	M	5.5	6.7	8.7	1.8	10.4	61.9	25.9					
29057459	BF74-8	2.1	45	VH	68	VH	63	L	1572	H	6.5	6.9	10.1	1.5	12.5	77.8	8.1					
29057460	BF74-9	2.1	49	VH	80	VH	62	L	1373	H	5.7	6.7	10.1	1.6	9.6	68.0	20.8					

Sample ID	Surface		Sub 1		Sub 2		Sulfur S _{ICAP}	ZINC Zn	MANGANESE Mn	IRON Fe	COPPER Cu	BORON B	EXCESS LIME RATE	SOLUBLE SALTS RATE
	ppm	depth IN	ppm	depth IN	ppm	depth IN								
BF74-1		0-6												
BF74-2		0-6												
BF74-3		0-6												
BF74-4		0-6												
BF74-5		0-6												
BF74-6		0-6												
BF74-7		0-6												
BF74-8		0-6												
BF74-9		0-6												

HAROLD-BALL FARM - TRACT 20

11/24/2017

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGUE

REPORT NUMBER 17-319-1619

PAGE 1/1

ANALYSIS DATE NOV 18, 2017

REPORT DATE NOV 24, 2017

ACCOUNT NO. 12997

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11210 WABASH RD
MILAN MICH 48160

PO BOX 215
DEWITT IA
52742-0215

Harold's PDD

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS		BICARBONATE P	POTASSIUM		MAGNESIUM		CALCIUM	SODIUM	pH	EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)					
			P ₁	P ₂		K	Mg	Ca	Na					% K	% Mg	% Ca	% H	% Na	
32302582	H100-1	3.5	M	57	VH	70	VH	179	M	391	VH	3383	H	7.5	20.6	2.2	15.8	82.0	14.8
32302583	H100-2	3.0	M	51	VH	100	VH	128	M	290	VH	2177	H	6.0	16.0	2.1	15.1	68.0	14.8
32302584	H100-3	2.8	M	41	VH	77	VH	72	L	181	H	1489	M	5.6	11.9	1.6	12.7	82.6	23.1
32302585	H100-4	2.5	L	62	VH	95	VH	67	L	134	M	1138	M	5.2	10.7	1.6	10.4	53.2	34.8
32302586	H100-5	2.0	L	66	VH	106	VH	56	L	79	L	592	L	4.5	9.0	1.6	7.3	32.9	58.2
32302587	H100-6	2.0	L	54	VH	82	VH	70	L	150	VH	1069	M	5.9	8.2	2.2	15.2	65.2	17.4
32302588	H100-7	2.2	L	72	VH	105	VH	89	L	152	H	1140	M	5.8	8.8	2.0	14.4	64.8	18.8
32302589	H100-8	2.5	L	62	VH	87	VH	66	L	134	M	986	M	5.1	10.0	1.7	11.2	49.3	37.8
32302590	H100-9	2.6	M	61	VH	104	VH	74	L	143	M	1069	M	5.1	10.8	1.8	11.0	49.5	37.7
32302591	H100-10	2.1	L	50	VH	87	VH	87	L	186	VH	1348	M	5.8	10.5	2.1	14.8	64.2	18.9

Sample ID	Surface		Sub 1		Sub 2		Total	SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME RATE	SOLUBLE SALTS RATE
	ppm	lbs/A	ppm	lbs/A	ppm	lbs/A		ppm	lbs/A	ppm	lbs/A	ppm	lbs/A	ppm	lbs/A	ppm	lbs/A	ppm	lbs/A		
H100-1		0-10																			
H100-2		0-10																			
H100-3		0-10																			
H100-4		0-10																			
H100-5		0-10																			
H100-6		0-10																			
H100-7		0-10																			
H100-8		0-10																			
H100-9		0-10																			
H100-10		0-10																			

CASPER-TRACT 21

11/24/2017

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGE

REPORT NUMBER: **17-319-1621**
 ANALYSIS DATE: **NOV 18, 2017**
 ACCOUNT NO.: **12997**

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GROWER:
WESTSIDE SERVICE
11210 WABASH RD
MILAN MICH 48160

PO BOX 215
DEWITT IA
52742-0215

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LoI	PHOSPHORUS			P ₂ STEELE ppm	BICARBONATE P d.lsen ppm	K ppm	Mg ppm	Ca ppm	SODIUM ppm	pH	SOIL BUFFER pH	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)		
			P ₁ WEATHER ppm	P ₂ STEELE ppm	P ₃ ppm										% K	% Mg	% Ca
32302585	CN43-1	2.7	M	14	H	73	L	168	H	1836	VH	6.9	10.8	1.7	13.0	85.3	
32302586	CN43-2	2.7	M	38	VH	93	L	171	H	1535	M	5.8	11.5	2.1	12.4	66.7	
32302587	CN43-3	2.7	M	28	H	103	M	180	H	1902	H	6.4	12.4	2.1	12.1	76.7	
32302588	CN43-4	2.2	L	19	M	72	L	149	H	1309	H	8.5	8.6	2.1	14.4	76.1	
32302589	CN43-5	3.1	M	17	M	129	M	245	VH	2021	H	6.4	13.7	2.4	14.9	73.8	

Sample ID	NITRATE-N (ppm)			SULFUR S _{ICAP}			ZINC Zn ppm	MANGANESE Mn ppm	IRON Fe ppm	COPPER Cu ppm	BORON B ppm	EXCESS LIME RATE	SOLUBLE SALTS ₁₁ mmhos/cm
	Surface lbs/A	depth IN	Total lbs/A	Sub 1 ppm	Sub 2 ppm	depth IN							
CN43-1	0-10												
CN43-2	0-10												
CN43-3	0-10												
CN43-4	0-10												
CN43-5	0-10												

PATTIE - TRACT 22, 23, 24

Soil Analysis Report

Report To
 NUTRIEN AG SOLUTIONS INC
 9325 W MICHIGAN AVE
 SALINE, MI 48176

Prepared For
 GARY HEATH
 GARY HEATH

Sampled
 09-13-2013
 Tested
 09-18-2013



Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating			Base Saturation					Mehlich-3 PPM and Rating						
		Soil pH	Buffer pH		Phosphorus P	Potassium K	Magnesium Mg	Calcium Ca	CEC	K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
PATTI LATE BEAN	H18031	6.7	7.1	2.5	25 M	238 G	387 G	2852 G	17.1	3.0	16.6	62.4	28 G	1.2M	5.8 G			47 G	

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

PATTIE - TRACT 22, 23, 24

Soil Fertility Recommendations

Report To
NUTRIEN AG SOLUTIONS INC
 9325 W MICHIGAN AVE
 SALINE, MI 48176

Prepared For
GARY HEATH
GARY HEATH

Sampled
 Tested
 09-13-2013
 09-18-2013



Sample Number	Lab Number	Year	Crop	Yield Goal	Acres	Nutrient recommendations expressed in broadcast rates of lbs/A except where noted.											
						CaCO3** Lime	N	P2O5	K2O	Mg	S	B	Cu	Fe Foliar	Mn Row	Zn	
PATTI LATE BEAN	H18031	14	Corn	150 bu		0	185	108	71	0	9	0.00				0	2

** Lime expressed in 100% pure CaCO3. Adjust accordingly.
 D = Dolomitic Lime C = Calcitic Lime

Corn: Starter fertilizer is normally suggested regardless of soil test levels. Monitor and adjust nutrient program based on annual leaf analysis.

PATTIE - TRACT 22, 23, 24

Soil Analysis Report

Report To NUTRIEN AG SOLUTIONS INC 9325 W MICHIGAN AVE SALINE, MI 48176	Prepared For GARY HEATH GARY HEATH
Sampled 09-13-2013 Tested 09-18-2013	



Sample Number	Lab Number	pH		Organic Matter %	Analysis Result* and Rating		Base Saturation			Mehlich-3 PPM and Rating									
		Soil pH	Buffer pH		Potassium K	Phosphorus P	Magnesium Mg	Calcium Ca	CEC	K %	Mg %	Ca %	Sulfur S	Boron B	Zinc Zn	Iron Fe	Copper Cu	Mang. Mn	Alum. Al
PATTI ERLY BEAN	H18032	6.6	7.0	3.2	157 M	314 G	2582 G	15.4	2.2	14.9	62.9	15 M	0.9M	3.4 M			23 G		

* Results: P, K, Mg and Ca are extracted by Mehlich-3 (ICP) and are reported in ppm
 Ratings: L=Low M=Medium G=Good H=High V=Very High

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PATTIE - TRACT 22, 23, 24

Soil Fertility Recommendations



Report To

NUTRIEN AG SOLUTIONS INC
9325 W MICHIGAN AVE
SALINE, MI 48176

Prepared For

GARY HEATH
GARY HEATH

Sampled
Tested

09-13-2013
09-18-2013

Sample Number	Lab Number	Year	Crop	Yield Goal	Acres	Nutrient recommendations expressed in broadcast rates of lbs/A except where noted.											
						CaCO3** Lime	N	P2O5	K2O	Mg	S	B	Cu	Fe Foliar	Mn Row	Zn	
PATTI ERLY BEAN	H18032	14	Corn	150 bu		0	178	109	146	0	13	0.25				2	4

** Lime expressed in 100% pure CaCO3. Adjust accordingly.
D = Dolomitic Lime C = Calcitic Lime

Corn: Starter fertilizer is normally suggested regardless of soil test levels. Monitor and adjust nutrient program based on annual leaf analysis.

PATTIE - TRACT 22, 23, 24

5/9/2016

REPORT NUMBER **16-126-0197**
 ANALYSIS DATE **MAY 9, 2016**
 ACCOUNT NO. **12997**

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGE



PAGE

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REPORT DATE **MAY 9, 2016**
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HOWARD HOGE
AG SPECTRUM
6957 COUNTY RD M
DELTA OH
43515-

GROWER
WESTSIDE SERVICE LLC
11210 WABASH RD
MILAN MICH48160

PO BOX 215
DEWITT IA
52742-0215

SOIL ANALYSIS REPORT
VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		pH	SOIL BUFFER INDEX	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)				
			P ₁	P ₂	K	Mg	Ca	Na	% K	% Mg	% Ca	% H				% Na				
297235662	P12-1	2.3	13	31	73	231	1566	1026	1338	6.8	10.0	1.9	19.2	78.9	9.7	2.1	16.2	71.9	9.8	
297235663	P12-2	2.2	9	28	79	188	1395	1026	1338	6.3	9.7	2.1	16.2	71.9	9.7	2.1	16.2	71.9	9.8	
297235664	P12-3	2.3	13	26	46	92	1026	1026	1338	5.9	7.2	1.6	10.6	71.2	16.6	1.6	10.6	71.2	16.6	
297235665	P12-4	2.7	30	69	78	139	1338	1338	1338	5.9	9.6	2.1	12.1	69.7	16.1	2.1	12.1	69.7	16.1	

Sample ID	Surface		Sub 1		Sub 2		Total	SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME RATE	SOLUBLE SALTS mmhos/cm
	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN		ppm	lbs/A	ppm	rate	ppm	rate	ppm	rate	ppm	rate	ppm	rate		
P12-1			0-6																		
P12-2			0-6																		
P12-3			0-6																		
P12-4			0-6																		

PATTIE - TRACT 22, 23, 24

5/9/2016

REPORT NUMBER: 16-126-0199
 ANALYSIS DATE: MAY 9, 2016
 ACCOUNT NO.: 12997

MIDWEST LABORATORIES, INC. SOIL REPORT FOR HOWARD HOGE



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HOWARD HOGE
 AG SPECTRUM
 6957 COUNTY RD M
 DELTA OH
 43515-

GROWER
 WESTSIDE SERVICE LLC
 11210 WABASH RD
 MILAN MICH 48160

PO BOX 215
 DEWITTA
 52742-0215

SOIL ANALYSIS REPORT VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER	PHOSPHORUS		BICARBONATE P (CLSEN)	NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE)				pH	CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)					
			P ₁ WEAK BRW 1:7 ppm RATE	P ₂ STRONG BRW 1:7 ppm RATE		POTASSIUM K ppm RATE	MAGNESIUM Mg ppm RATE	CALCIUM Ca ppm RATE	SODIUM Na ppm RATE			SOIL BUFFER INDEX	C.E.C. meq/100g	% K	% Mg	% Ca	% H
29723574	P90-1	3.2	19	48	116	207	2111	6.8	12.6	2.4	13.7	83.9					
29723575	P90-2	5.1	12	66	91	237	3313	7.2	18.8	1.2	10.5	88.3					
29723576	P90-3	2.8	8	22	85	161	1819	6.3	10.8	2.0	12.4	75.0	10.6				
29723577	P90-4	2.3	10	23	70	108	1106	6.8	8.0	2.2	11.2	69.1	17.5				
29723578	P90-5	2.2	10	22	74	121	1189	5.9	8.6	2.2	11.7	69.1	17.0				
29723579	P90-6	2.8	10	49	91	164	1726	6.3	11.4	2.0	12.0	75.7	10.3				
29723580	P90-7	2.6	6	35	101	222	1956	7.1	11.9	2.2	15.5	82.3					
29723581	P90-8	2.7	5	44	86	229	2402	7.3	14.1	1.6	13.5	84.9					
29723582	P90-9	2.7	7	29	77	219	1828	6.7	11.2	1.8	16.3	81.9					

Sample ID	SURFACE			NITRATE-N (RA)			SULFUR S (LOP)			ZINC Zn			MANGANESE Mn			IRON Fe			COPPER Cu			BORON B			EXCESS LIME RATE			SOLUBLE SALTS (cm)		
	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	mmhos/cm	RATE	ppm	RATE	cm		
																													Sub 1	Sub 2
P90-1			0-6																											
P90-2			0-6																											
P90-3			0-6																											
P90-4			0-6																											
P90-5			0-6																											
P90-6			0-6																											
P90-7			0-6																											
P90-8			0-6																											
P90-9			0-6																											