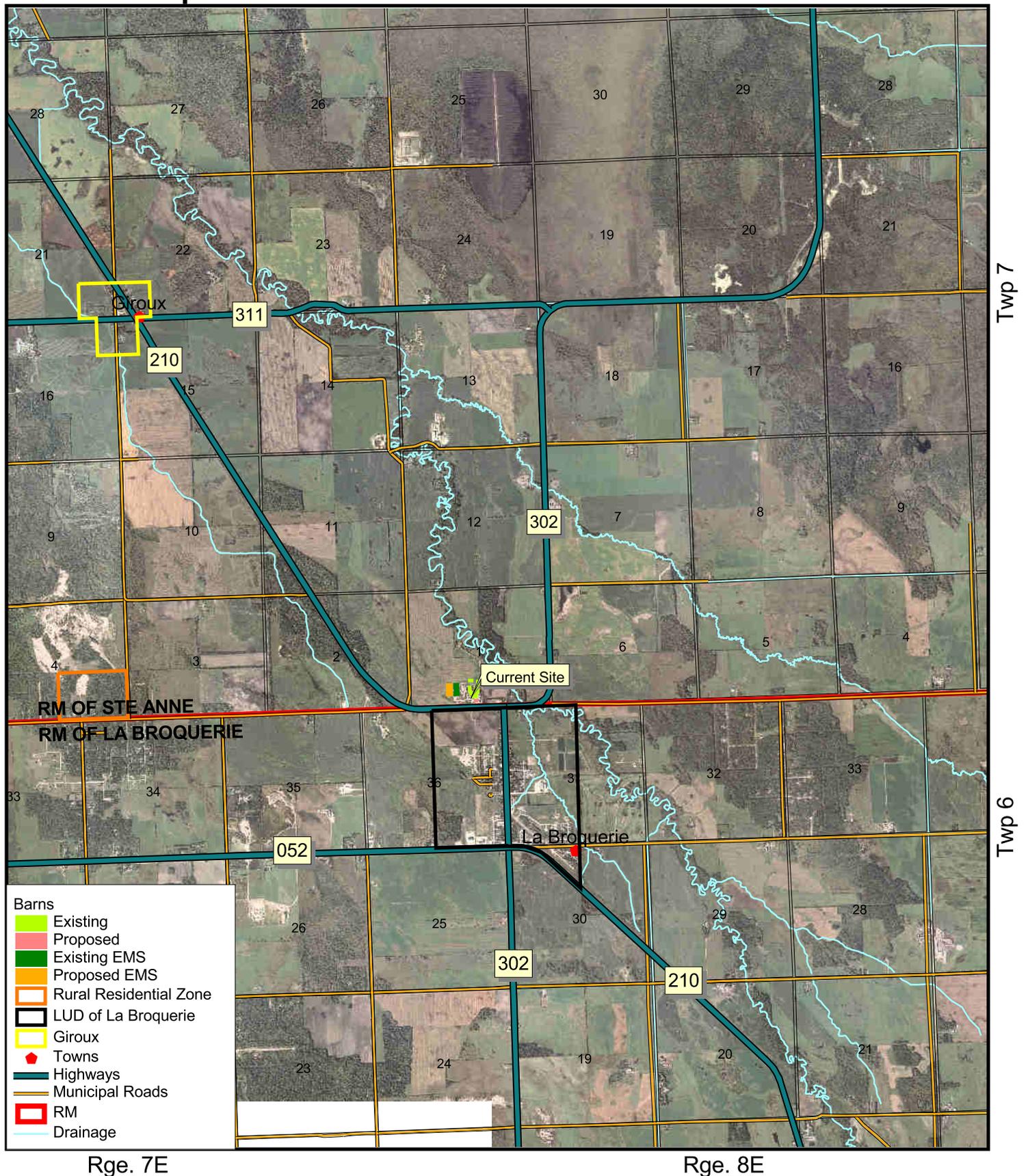


Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc. Location Map

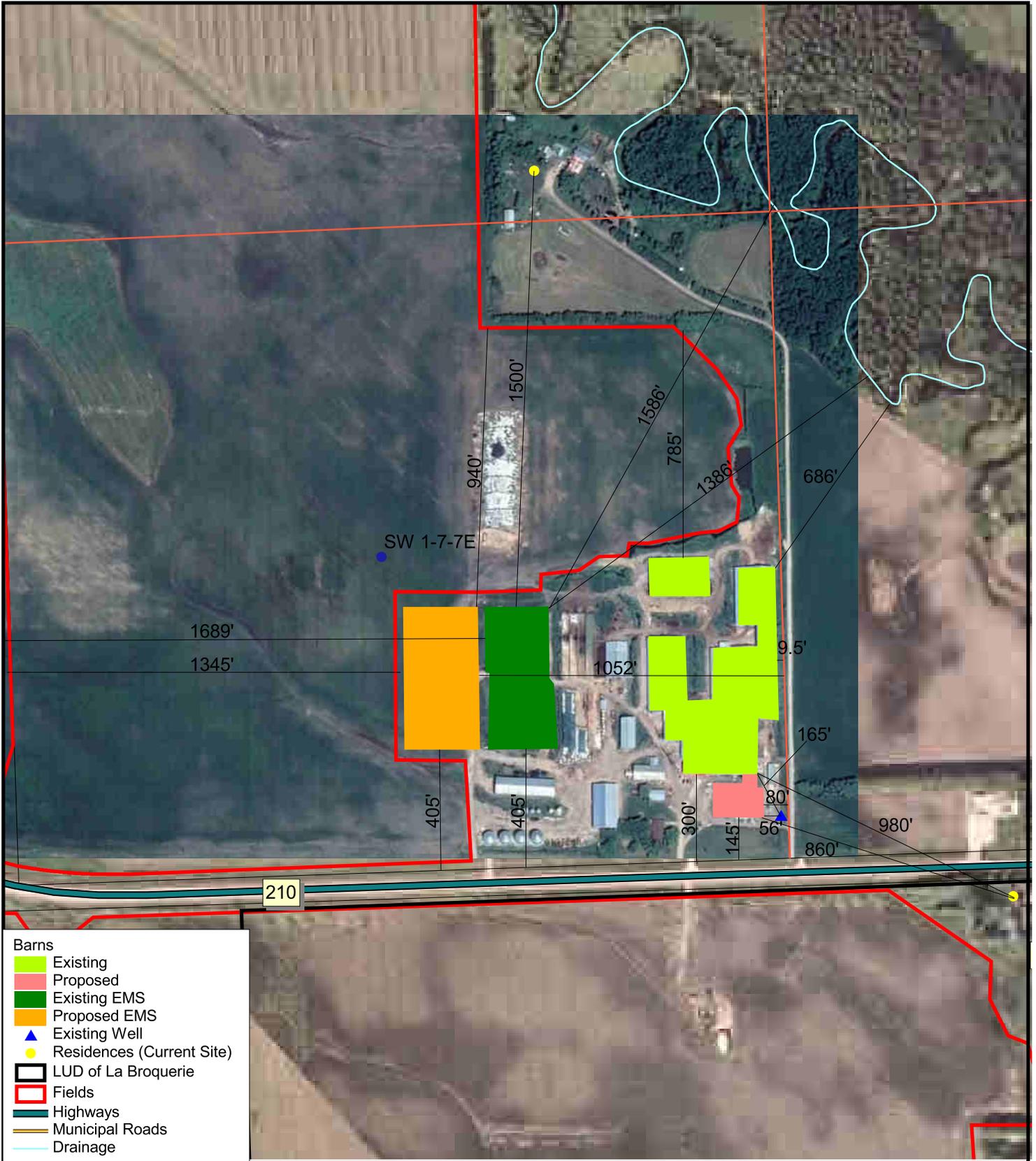


0 1 Miles
1:60000

Data Sources:
Fields drawn by Tone Ag in consultation with landowner, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website

T.A.C.
TONE AG CONSULTING
2019-09-03

Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc. Project Site Plan (SW 1-7-7E)



0 0.1 Miles
1:5500

Data Sources:
 Fields drawn by Tone Ag in consultation with
 landowner, and subject to change.
 Orthophotos are 1:60,000 from Manitoba Land Initiative website
 Highways are from Manitoba Highways and
 Transportation 1:60,000 map 1994
 Sections are from Manitoba Land Initiative website



Animal Units Calculator

A	B	C	Current Operation		Proposed Operation	
			D	E	F	G
Operation Type	Animal Categories	Animal Units per Head	Current Number of Animals ¹	Current Animal Units	Proposed Number of Animals ²	Proposed Number of Animal Units
Dairy ³	Mature cows (lactating and dry) including associated livestock	2	300	600	920	1,840
	Mature cows (lactating and dry)	1.35		-		-
	Heifers (0 to 3 months)	0.16		-		-
	Heifers (4 to 13 months)	0.41		-		-
	Heifers (> 13 months)	0.87		-		-
	Bulls	1.35		-		-
	Veal calves	0.13		-		-
Beef	Beef cows including associated livestock	1.25		-		-
	Backgrounder	0.5		-		-
	Summer pasture / replacement heifers	0.625		-		-
	Feeder cattle	0.769		-		-
Pigs	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weaning (up to 11 lbs)	0.25		-		-
	Sows - farrow to nursery (51 lbs)	0.313		-		-
	Boars (artificial insemination units)	0.2		-		-
	Weanlings, Nursery (11-51 lbs)	0.033		-		-
	Growers / Finishers (51-249 lbs)	0.143		-		-
Chickens	Broilers	0.005		-		-
	Roasters	0.01		-		-
	Layers	0.0083		-		-
	Pullets	0.0033		-		-
	Broiler breeder pullets	0.0033		-		-
	Broiler breeder hens	0.01		-		-
Turkeys	Broilers	0.01		-		-
	Heavy Toms	0.02		-		-
	Heavy Hens	0.01		-		-
Horses	Mares	1.333		-		-
Sheep	Ewes	0.2		-		-
	Feeder lambs	0.063		-		-
Other Livestock	Type:			-		-
	Type:			-		-
Total Current:				600	Total Proposed:	1,840

Footnotes:

¹ Enter the current number of animals on the farm based on the operation's capacity (animal places) or previous Conditional Use Approval.

² Enter the total number of animals associated with the operation post construction or expansion.

³ There are 2 methods for calculating animal units for dairy (Farm Practices Guidelines for Dairy Producers in Manitoba, 1995). You can enter the total number of mature cows in the milking herd under the "Mature cows (lactating and dry) including associated livestock" category and the animal units will be calculated by multiplying this number by 2. This calculation assumes 85 lactating, 15 dry, 12 heifers (0 to 3 months), 36 heifers (4 to 13 months) and 50 heifers (> 13 months) for an operation with 100 mature cows. "Associated livestock" includes all of the heifer calves and replacement heifers. Alternatively, you can enter animal numbers in the individual categories (mature cows, heifers (0 to 3 months), heifers (4 to 13 months) and heifers (> 13 months)) and they will be summed at the bottom of the table. Bulls and veal calves are always calculated separately.

[For all other livestock or operation types please inquire with the Manitoba Agriculture Contacts](#)



Dairy Barn Water Requirement Estimator*

Enter the following farm data:

Number of lactating/milking cows	800
Average milk production (litres)	33 **
Parlor or tie stall (P/TS)	P
Collection yard if free stall (Y/N)	N
Plate cooler (Y/N)	Y
Milkings per day	2
Plate cooler water reused? (Y/N)	Y

Total water needs estimate per day:	
Litres	137120
Imperial gallons	30203
Cubic decametres	0.14

Total water needs estimate per year:	
Litres	50048800
Imperial gallons	11023965
Cubic decametres	50.05

*Calculations are based on Manitoba AVERAGES for
 • Feed composition

MANURE APPLICATION FIELD CHARACTERISTICS TABLE

LEGAL	MUNICIPALITY	SOIL TEST FIELD ID NO.	DATE OF SOIL TEST	O/C/L/A	TOTAL ACREAGE	SETBACKS INCLUDING FEATURES (1)	NET ACREAGE FOR MANURE APPLICATION	AGRICULTURE CAPABILITY CLASS AND SUBCLASS	SOIL PHOSPHORUS (PPM OLSON P) 0 - 6"	DEVELOPMENT PLAN DESIGNATION	ZONING
E 1/2 3-7-7E	Ste. Anne	1	9/6/2018	O	240	bush/slough	230	2M, 3M, 5W	18	Rural Mixed Use Area	Rural Mixed Use
PT E 2 & SE 11-7-7E	Ste. Anne	7	9/5/2017	O	160		160	3M, 4M, 5W	39	Rural Agricultural Area	Agriculture
ESE 11-7-7E	Ste. Anne	9	11/2/2017	O	75		75	5W	32	Rural Agricultural Area	Agriculture
W 1/2 1-7-7E	Ste. Anne	10	11/2/2017	O	180	inundated area	161	5W, 3M	50	Rural Agricultural Area	Agriculture
PT S 6-7-8E	Ste. Anne	11	11/2/2017	O	150	inundated area, 6W	135	5W	49	Rural Agricultural Area	Agriculture
S 1/2 5-7-8E	Ste. Anne	12	11/2/2017	O	140	inundated area, 6W	91	2MP	17	Rural Agricultural Area	Agriculture
NW 5-7-8E	Ste. Anne	13A	11/2/2017	O	115	inundated area	112	2M, 5W	23	Rural Agricultural Area	Agriculture
NE 5-7-8E	Ste. Anne	13B/C	11/2/2017	O	170		165	5W	7	Rural Agricultural Area	Agriculture
4-7-8E	Ste. Anne	14	10/26/2018	O	302		302	3P, 5W	33	Rural Agricultural Area	Agriculture
PT E 1/2 4-7-8E	Ste. Anne	15	11/2/2017	O	130		128	5W, 2MP	37	Rural Agricultural Area	Agriculture
NW 3-7-7E	Ste. Anne	20	11/2/2017	O	105	bush/slough	96	5W, 2W, 3M, 5M	10	Rural Mixed Use Area	Rural Mixed Use
NW 11-7-7E	Ste. Anne	21	11/2/2017	O	127	planned EMS	125	3M-5W	6	Rural Agricultural Area	Agriculture
N 1/2 35-6-7E	La Broquerie	3	10/26/2018	O	290		290	3M, 2M, 5W	33	Agricultural Area 2	Rural Area 2
NW 36-6-7E	La Broquerie	5	11/2/2017	O	90	6W	60	5W, 3M, 4M	24	Agricultural Area 2	Rural Area 2
TOTALS					2274		2130				

NOTES: (1) For areas affected by listed features, acreage for manure spread have taken into account and incorporate appropriate setbacks.

Spreadable Acres in Ste Anne 1780

Spreadable Acres in La Broquerie 350

Existing EMS (based on DGH Engineer records)

Two identical cells built in 1997 and 2002, respectively.

The dimensions and holding capacity of each cell:

Top dimension:	195'X195'
Bottom dimension:	99'X99'
Depth:	16'
Free board:	20"
Interior slope:	1 : 3 (vertical : horizontal)
Effective volume:	299,000 cubic feet
Holding capacity:	100 days (manure generation rate 3.5 cubic feet per cow per day)

In 2012, Balcaen Farms sought feasibilities to increase the holding capacity of the existing cells by removing the common berm between the two cells. It is feasible but we do not recommend this modification. The cells were built approximately 20 years ago. The policies on EMS construction changed significantly in the past 15 years. The costs for modifying the existing cells will be more expensive than building a new cell. Furthermore, even the common berm is removed, the holding capacity of the modified cells is still insufficient for 800 milking cows.

The soils on site are sandy material. The existing cells were clay lined structure. High plastic clay source is situated approximately 4 feet to 17 feet below grade.

Proposed EMS

Present Requirements for EMS:

Holding capacity:	minimum 400 days; maximum 750 days
Free board:	20"
Interior slope:	1 : 4 (vertical : horizontal)

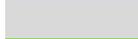
The dimensions of the proposed cell are shown as following. The dimensions can be modified. The volume shown below is the minimum required.

Top dimensions:	450'X200'
Bottom dimensions:	338'X88'
Depth:	14'
Free board:	20"
Interior slope:	1 : 4 (vertical : horizontal)
Effective volume:	666,076 cubic feet
Holding capacity:	238 days (manure generation rate 3.5 cubic feet per cow per day)

Location of the proposed cell is recommended to be on the west side of the existing cells.

Manitoba Agriculture Land Base Calculator

Colour Conventions:

-  Farm specific data can be entered in the yellow cells of each tab. Where appropriate, default values have been provided but can be changed.
-  Fixed data are provided in the grey cells of each tab.
-  Calculated values are shown in the green cells of each tab.
-  **The land base required for nitrogen (N) and phosphorus (P2O5) are provided in the amber cells on tab 4.**

Data Entry and Tab Information:

Enter the operation name on all of the livestock tabs (1a to 1e) associated with your farm.

Enter all of the livestock for your farm and associated data in the yellow cells under tabs 1a to 1e.

Enter all of the crop rotation data on tab 2. Long-term crop yield averages using MASC records are required for Provincial Technical Review Site Assessments.

Total nitrogen (N) and total phosphorus (P2O5) excreted by the livestock are summarized on tab 3.

Nutrient excretion, crop nutrient use and acres required for nitrogen (N) and phosphorus (P2O5) are summarized on tab 4.

For assistance, contact:

Clay Sawka, Nutrient Management Specialist, Manitoba Agriculture, (204) 750-3066

Petra Loro, Livestock Environment Specialist, Manitoba Agriculture, (204) 918-0325

Last revised October 16, 2018

1c - Dairy

Operation Name: ELBI					
Type	Storage Type	Volatilization	Animal Numbers	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted per Herd Per Year (lb/yr/herd)
Mature Cows, plus associated livestock	Liquid Uncovered Earthen	30%	920	239905	127307

Last revised August 20, 2014

2 - Crop Rotation

Operation Name:

ELBI

Crop	Removal		Uptake		ELBI			Removal		Uptake
	P2O5	N	N	Units	Yield	Units	Acreage	P2O5 (lb)	N (lb)	N (lb)
Alfalfa	13.8	58	58	lb/ton	5.11	ton/ac	1045	73691	309717	309717
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu		bu/ac		-	-	-
Corn Grain	0.44	0.97	1.53	lb/bu	119.3	bu/ac	435	22834	50339	79400
Corn Silage	12.7	31.2	31.2	lb/ton	4.13	tons/ac	650	34093	83756	83756
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac		-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac		-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac		-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac		-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac		-	-	-
Oats	0.26	0.62	1.07	lb/bu		bu/ac		-	-	-
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac		-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac		-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac		-	-	-
Rye	0.45	1.06	1.67	lb/bu		bu/ac		-	-	-
Soybeans	0.84	3.87	5.2	lb/bu		bu/ac		-	-	-
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu		bu/ac		-	-	-
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-

Total Acres 2130 130618 443812 472874

Estimated Average Removal/Uptake (lb/ac) 61.3 208.4 222.0

Acres in Hanover and La Broquerie 350

Proportion in Hanover or La Broquerie 16%

Additional Acres

Crop Planned on Additional Acres

Total Acreage 2130

***Notes:**

Enter the number of acres that are in the RM's of Hanover or La Broquerie in cell H26.
Additional acres include acres for which crop removal or soil data is limited or unavailable.

3 - Farm Excretion

Operation Name:

ELBI

Species	Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
Pigs	Boars	0	0
	Weanlings	0	0
	Growers/finishers	0	0
	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
Beef	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Mature Cows, plus assoc livestock	239905	127307
Sheep	Ewes	0	0
	Replacement Ewes	0	0
	Rams	0	0
	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
Chickens	Broilers	0	0
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	Layer Pullets	0	0
	Layer Hens	0	0
	Breeder Pullets	0	0
	Breeder Hens	0	0
Turkeys	Broiler Hens (0-9 wks)	0	0
	Hens (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Light Toms (0-12 wks)	0	0
	Toms (0-13 wks)	0	0
	Heavy Toms (0-15 wks)	0	0
	Breeding Hen Growers (0-30 wks)	0	0
	Breeding Hens (30-60 wks)	0	0
	Breeding Tom Grower (0-18 wks)	0	0
	Breeding Tom Grower (0-30 wks)	0	0
Breeding Tom (30-60 wks)	0	0	
Total		239905	127307

Note:

Be sure all livestock species on your farm are represented in this table, not just the livestock in the proposed expansion.

4 - Land Base Summary

Operation Name:	ELBI
Nutrients Excreted	lbs
Nitrogen	239905
Phosphorus (P2O5)	127307
Crop Nutrient Use	lb/ac
Crop N Uptake	222.0
Crop Phosphorus (P2O5) Removal	61.3
Operation-specific Phosphorus (P2O5) Credit	112.6
Land Available	2130
Land Base Required	acres
Acres for Nitrogen	1081
Acres for Phosphorus (P2O5)	1131
Phosphorus Balance	acres
Acres for Phosphorus Balance (1X)	2076

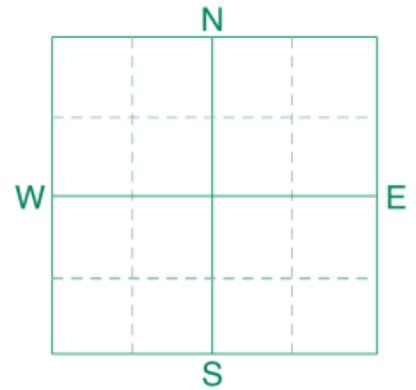
Last revised October 16, 2018



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 16**
 SAMPLE ID
 FIELD NAME **Field 16**
 COUNTY **NE 35-06-08E**
 TWP RANGE
 SECTION QTR ACRES **135**
 PREV. CROP



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **1886660** BOX # **0**

LAB # **NW23353**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans		
Nitrate	0-6" 6-24"	***				YIELD GOAL 160 BU			YIELD GOAL 20 Tons			YIELD GOAL 50 BU		
	0-24"	***				SUGGESTED GUIDELINES Broadcast			SUGGESTED GUIDELINES Broadcast			SUGGESTED GUIDELINES Broadcast		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Phosphorus	Olsen 30 ppm	*****				N	179		N	195		N	***	
Potassium	83 ppm	*****				P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0	
Chloride	0-24" 420 lb/ac	*****				K ₂ O	126	Broadcast	K ₂ O	144	Broadcast	K ₂ O	82	Broadcast
Sulfur	0-6" 30 lb/ac 6-24" 54 lb/ac	*****				Cl		Not Available	Cl		Not Available	Cl	0	
Boron	0.6 ppm	*****				S	15	Broadcast (Trial)	S	15	Broadcast (Trial)	S	15	Broadcast (Trial)
Zinc	2.09 ppm	*****				B	0		B	0		B	0	
Iron	41.4 ppm	*****				Zn	0		Zn	0		Zn	0	
Manganese	3.5 ppm	*****				Fe	0		Fe	0		Fe	0	
Copper	0.87 ppm	*****				Mn	0		Mn	0		Mn	0	
Magnesium	371 ppm	*****				Cu	0		Cu	0		Cu	0	
Calcium	3411 ppm	*****				Mg	0		Mg	0		Mg	0	
Sodium	35 ppm	****				Lime			Lime			Lime		
Org.Matter	2.4 %	*****				Soil pH	Buffer pH		Cation Exchange Capacity	% Base Saturation (Typical Range)				
Carbonate(CCE)	1.5 %	*****				0-6" 8.1			20.5 meq	% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.3 mmho/cm 6-24" 0.21 mmho/cm	*****				6-24" 8.3				(65-75) 83.1	(15-20) 15.1	(1-7) 1.0	(0-5) 0.7	(0-5)

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

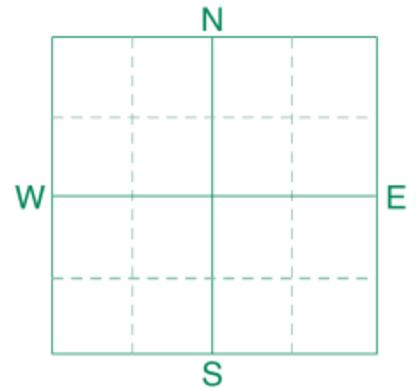
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is low based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 15**
 SAMPLE ID
 FIELD NAME **Field 15**
 COUNTY **E04-07-08E**
 TWP RANGE
 SECTION QTR ACRES **180**
 PREV. CROP **Alfalfa**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1886661** BOX # **0**
 LAB # **NW23357**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	**				YIELD GOAL		YIELD GOAL		YIELD GOAL				
						3 lb/ac 6 lb/ac		160 BU		20 Tons		50 BU		
	0-24"					9 lb/ac		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
Phosphorus	Olsen	*****				Broadcast		Broadcast		Broadcast				
		34 ppm		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION				
Potassium		*****				N	133	N	149	N	***			
Chloride	0-24"	*****				P ₂ O ₅	15	P ₂ O ₅	15	P ₂ O ₅	0			
		392 lb/ac		K ₂ O		117	Broadcast	K ₂ O	136	Broadcast	K ₂ O	76	Broadcast	
Sulfur	0-6" 6-24"	*****				Cl	Not Available	Cl	Not Available	Cl	0			
		56 lb/ac 108 lb/ac		S		0		S	0	S	0			
Boron		*****				B	0	B	0	B	0			
Zinc		*****				Zn	5	Zn	5	Zn	0			
Iron		*****				Fe	0	Fe	0	Fe	0			
Manganese		*****				Mn	0	Mn	0	Mn	0			
Copper		*****				Cu	0	Cu	0	Cu	0			
Magnesium		*****				Mg	0	Mg	0	Mg	0			
Calcium		*****				Lime		Lime		Lime				
Sodium		*****				Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
Org.Matter		*****				0-6"	8.1	30.0 meq		% Ca	% Mg	% K	% Na	% H
Carbonate(CCE)		*****				6-24"	8.1			(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
Sol. Salts	0-6" 6-24"	*****								85.0	13.6	0.8	0.7	
		0.41 mmho/cm 0.32 mmho/cm												

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 50 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 50 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

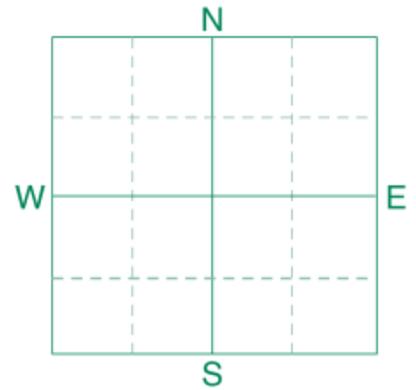
Crop 3: Nitrogen is credited 25 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is low based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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SOIL TEST REPORT

FIELD ID **Field 12**
 SAMPLE ID
 FIELD NAME **Field 12**
 COUNTY **S 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **160**
 PREV. CROP **Alfalfa**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1886662** BOX # **0**
 LAB # **NW23343**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice						
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans						
Nitrate	0-6" 6-24"	**				YIELD GOAL		YIELD GOAL		YIELD GOAL						
						160 BU		20 Tons		50 BU						
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES						
						Broadcast		Broadcast		Broadcast						
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION					
Phosphorus	Olsen 24 ppm	*****				N	133	N	149	N	***					
Potassium	116 ppm	*****				P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	30 Broadcast	P ₂ O ₅	0					
Chloride	0-24"	*****				K ₂ O	92 Broadcast	K ₂ O	117 Broadcast	K ₂ O	62 Broadcast					
						Cl	Not Available	Cl	Not Available	Cl	0					
Sulfur	0-6" 6-24"	*****				S	0	S	0	S	0					
						B	0	B	0	B	0					
Boron	1.6 ppm	*****				Zn	4 Broadcast(Trial)	Zn	4 Broadcast(Trial)	Zn	0					
Zinc	1.37 ppm	*****				Fe	0	Fe	0	Fe	0					
Iron	55.8 ppm	*****				Mn	0	Mn	0	Mn	0					
Manganese	41.4 ppm	*****				Cu	0	Cu	0	Cu	0					
Copper	1.12 ppm	*****				Mg	0	Mg	0	Mg	0					
Magnesium	843 ppm	*****				Lime		Lime		Lime						
Calcium	4111 ppm	*****				Soil pH		Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Sodium	189 ppm	*****				0-6" 8.5		6-24" 8.6		28.7 meq		% Ca	% Mg	% K	% Na	% H
Org.Matter	4.3 %	*****										(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
Carbonate(CCE)	3.9 %	*****										71.6	24.5	1.0	2.9	
Sol. Salts	0-6" 6-24"	*****														

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 50 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. Nitrogen is credited 50 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

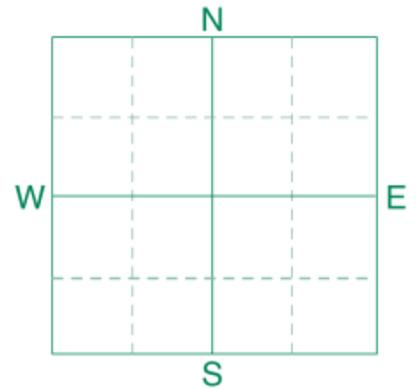
Crop 3: Nitrogen is credited 25 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is high based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 13A**
 SAMPLE ID
 FIELD NAME **Field 13A**
 COUNTY **NW 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **130**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1886663** BOX # **0**
 LAB # **NW23352**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans		
Nitrate	0-6" 6-24"	10 lb/ac 6 lb/ac	***									
	0-24"	16 lb/ac				YIELD GOAL	YIELD GOAL	YIELD GOAL				
						160 BU	20 Tons	50 BU				
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES				
Phosphorus	Olsen	23 ppm	*****			Broadcast	Broadcast	Broadcast				
						LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION				
Potassium		172 ppm	*****			N 176	N 192	N ***				
Chloride	0-24"	504 lb/ac	*****			P ₂ O ₅ 20	P ₂ O ₅ 35	P ₂ O ₅ 0				
						K ₂ O 35	K ₂ O 72	K ₂ O 28	Broadcast	Broadcast		
Sulfur	0-6" 6-24"	112 lb/ac 138 lb/ac	*****			Cl	Cl	Cl	0	0		
						S 0	S 0	S 0				
Boron		0.8 ppm	*****			B 0	B 0	B 0				
Zinc		1.57 ppm	*****			Zn 4	Zn 4	Zn 0	Broadcast(Trial)	Broadcast(Trial)		
Iron		46.8 ppm	*****			Fe 0	Fe 0	Fe 0				
Manganese		3.4 ppm	*****			Mn 0	Mn 0	Mn 0				
Copper		0.46 ppm	*****			Cu 0	Cu 0	Cu 0				
Magnesium		415 ppm	*****			Mg 0	Mg 0	Mg 0				
Calcium		4708 ppm	*****			Lime	Lime	Lime				
Sodium		59 ppm	*****									
Org.Matter		3.8 %	*****									
Carbonate(CCE)		3.3 %	*****									
Sol. Salts	0-6" 6-24"	0.55 mmho/cm 0.3 mmho/cm	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)			
						0-6" 8.1 6-24" 8.2		27.7 meq	% Ca (65-75) 85.0	% Mg (15-20) 12.5	% K (1-7) 1.6	% Na (0-5) 0.9

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

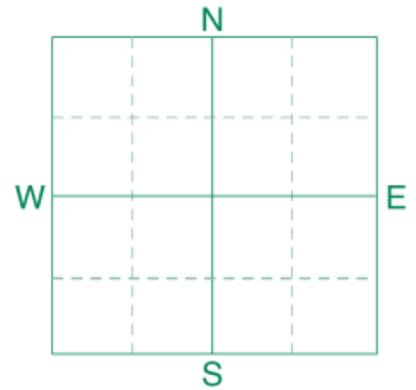
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is high based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 13B**
 SAMPLE ID
 FIELD NAME **Field 13B**
 COUNTY **NE 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **80**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **1886664** BOX # **0**
 LAB # **NW23355**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans			
Nitrate	0-6" 6-24"	27 lb/ac 36 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24"	63 lb/ac	*****			160 BU		20 Tons		50 BU			
Phosphorus	Olsen	16 ppm	*****			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	Potassium	129 ppm	*****			Broadcast		Broadcast		Broadcast			
Chloride	0-24"	476 lb/ac	*****			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
	0-6" 6-24"	116 lb/ac 192 lb/ac	*****			N	129	N	145	N	***		
Sulfur	Boron	0.9 ppm	*****			P ₂ O ₅	60 Broadcast	P ₂ O ₅	74 Broadcast	P ₂ O ₅	36 Broadcast		
	Zinc	1.82 ppm	*****			K ₂ O	79 Broadcast	K ₂ O	107 Broadcast	K ₂ O	54 Broadcast		
Iron	Manganese	3.3 ppm	*****			Cl	Not Available	Cl	Not Available	Cl	0		
	Copper	0.59 ppm	*****			S	0	S	0	S	0		
Magnesium	Boron	0.9 ppm	*****			B	0	B	0	B	0		
	Zinc	1.82 ppm	*****			Zn	2 Broadcast(Trial)	Zn	2 Broadcast(Trial)	Zn	0		
Calcium	Iron	44.3 ppm	*****			Fe	0	Fe	0	Fe	0		
	Manganese	3.3 ppm	*****			Mn	0	Mn	0	Mn	0		
Sodium	Copper	0.59 ppm	*****			Cu	0	Cu	0	Cu	0		
	Magnesium	372 ppm	*****			Mg	0	Mg	0	Mg	0		
Org.Matter	Calcium	5377 ppm	*****			Lime		Lime		Lime			
	Sodium	59 ppm	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
Carbonate(CCE)	Org.Matter	6.0 %	*****			0-6" 8.0		30.6 meq	% Ca	% Mg	% K	% Na	% H
	Carbonate(CCE)	2.5 %	*****			6-24" 8.2			(65-75) 87.9	(15-20) 10.1	(1-7) 1.1	(0-5) 0.8	(0-5)
Sol. Salts	Sol. Salts	0.56 mmho/cm 0.31 mmho/cm	*****										

General Comments: Texture is not estimated on high pH soils.

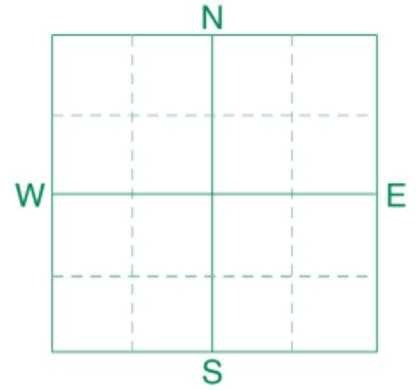
- Crop 1:** ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
- Crop 2:** ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
- Crop 3:** Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
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 Northwood: (701) 587-6010
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SOIL TEST REPORT

FIELD ID **Field 11**
 SAMPLE ID
 FIELD NAME **Field 11**
 COUNTY **SW 06-07-08E**
 TWP RANGE
 SECTION QTR ACRES **150**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1886665** BOX # **0**
 LAB # **NW23351**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice								
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans								
		*****				YIELD GOAL			YIELD GOAL			YIELD GOAL								
		*****				160 BU			20 Tons			50 BU								
		*****				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES								
		*****				Broadcast			Broadcast			Broadcast								
		*****				LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION							
Nitrate	0-6" 6-24" 8 lb/ac 12 lb/ac					N	172		N	188		N	***							
	0-24" 20 lb/ac					P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0							
Phosphorus	Olsen 47 ppm					K ₂ O	10	Band (2x2) *	K ₂ O	21	Broadcast	K ₂ O	0							
Potassium	236 ppm					Cl		Not Available	Cl		Not Available	Cl	0							
Chloride	0-24" 548 lb/ac					S	0		S	0		S	0							
Sulfur	0-6" 6-24" 80 lb/ac 138 lb/ac					B	0		B	0		B	0							
Boron	1.5 ppm					Zn	0		Zn	0		Zn	0							
Zinc	4.17 ppm					Fe	0		Fe	0		Fe	0							
Iron	34.8 ppm					Mn	0		Mn	0		Mn	0							
Manganese	4.3 ppm					Cu	0		Cu	0		Cu	0							
Copper	0.89 ppm					Mg	0		Mg	0		Mg	0							
Magnesium	475 ppm					Lime			Lime			Lime								
Calcium	4051 ppm					Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)								
Sodium	108 ppm					Buffer pH			Capacity			% Ca	% Mg	% K	% Na	% H				
Org.Matter	4.2 %					0-6" 8.4	25.3 meq			(65-75)	(15-20)	(1-7)	(0-5)	(0-5)						
Carbonate(CCE)	2.3 %					6-24" 8.6				80.1	15.7	2.4	1.9							
Sol. Salts	0-6" 6-24" 0.53 mmho/cm 0.28 mmho/cm																			

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

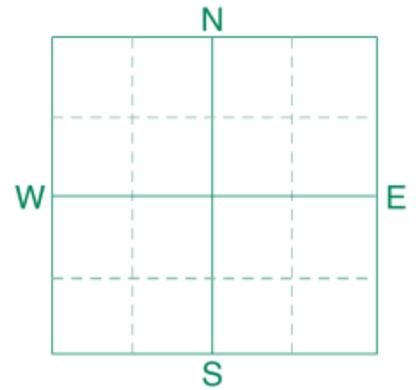
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 10**
 SAMPLE ID
 FIELD NAME **Field 10**
 COUNTY **W 01-07-07E**
 TWP RANGE
 SECTION QTR ACRES **180**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **1886666** BOX # **0**
 LAB # **NW23341**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans					
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL					
						160 BU		20 Tons		50 BU					
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
						Broadcast		Broadcast		Broadcast					
	Olsen	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION				
Phosphorus						N	163	N	179	N	***				
Potassium						P ₂ O ₅	15	P ₂ O ₅	15	P ₂ O ₅	0				
Chloride	0-24"					K ₂ O	79	K ₂ O	107	K ₂ O	54				
						Cl	Not Available	Cl	Not Available	Cl	0				
Sulfur	0-6"					S	0	S	0	S	0				
	6-24"					B	0	B	0	B	0				
Boron						Zn	0	Zn	0	Zn	0				
Zinc						Fe	0	Fe	0	Fe	0				
Iron						Mn	0	Mn	0	Mn	0				
Manganese						Cu	0	Cu	0	Cu	0				
Copper						Mg	0	Mg	0	Mg	0				
Magnesium						Lime		Lime		Lime					
Calcium						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)					
Sodium						Buffer pH				% Ca	% Mg	% K	% Na	% H	
Org.Matter						0-6"	7.8	23.6 meq		(65-75)	(15-20)	(1-7)	(0-5)	(0-5)	
Carbonate(CCE)						6-24"	8.0			82.1	15.6	1.4	0.9		
Sol. Salts	0-6"														
	6-24"														

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

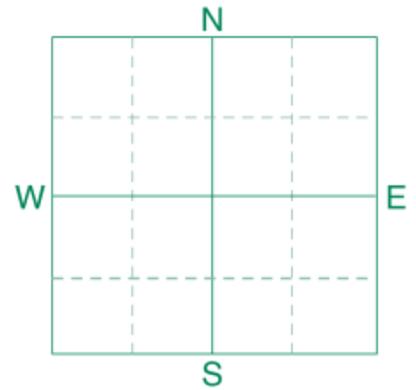
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is low based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
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 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 3**
 SAMPLE ID
 FIELD NAME **Field 3**
 COUNTY **N 35-06-07E**
 TWP RANGE
 SECTION QTR ACRES **290**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1886667** BOX # **0**
 LAB # **NW23346**

Date Sampled **04/20/2017**

Date Received **04/26/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
						160 BU		20 Tons		50 BU				
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen 37 ppm	*****				N 143		N 159		N ***				
Potassium	114 ppm	*****				P ₂ O ₅ 15	Band (2x2) *	P ₂ O ₅ 15	Band (2x2) *	P ₂ O ₅ 0				
Chloride	0-24" 444 lb/ac	*****				K ₂ O 94	Broadcast	K ₂ O 119	Broadcast	K ₂ O 63	Broadcast			
Sulfur	0-6" 60 lb/ac 6-24" 132 lb/ac	*****				Cl	Not Available	Cl	Not Available	Cl 0				
Boron	0.9 ppm	*****				S 0		S 0		S 0				
Zinc	4.55 ppm	*****				B 0		B 0		B 0				
Iron	29.6 ppm	*****				Zn 0		Zn 0		Zn 0				
Manganese	13.0 ppm	*****				Fe 0		Fe 0		Fe 0				
Copper	2.01 ppm	*****				Mn 0		Mn 0		Mn 0				
Magnesium	535 ppm	*****				Cu 0		Cu 0		Cu 0				
Calcium	4224 ppm	*****				Mg 0		Mg 0		Mg 0				
Sodium	52 ppm	*****				Lime		Lime		Lime				
Org.Matter	3.9 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)	3.1 %	*****				Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.4 mmho/cm 6-24" 0.24 mmho/cm	*****				0-6" 8.3		26.1 meq		(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
						6-24" 8.2				80.9	17.1	1.1	0.9	

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

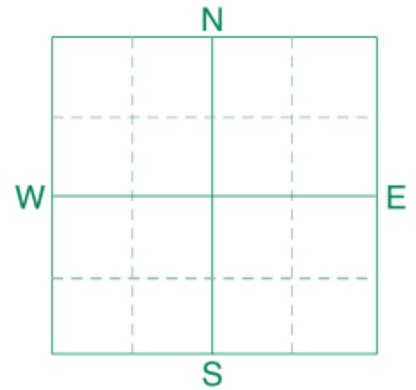
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 1**
 SAMPLE ID
 FIELD NAME **Field 1**
 COUNTY **E 03-07-07E**
 TWP RANGE
 SECTION QTR ACRES **240**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1896276** BOX # **0**
 LAB # **NW26854**

Date Sampled **05/01/2017**

Date Received **05/03/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	***				YIELD GOAL		YIELD GOAL		YIELD GOAL				
			4 lb/ac 12 lb/ac	160 BU	20 Tons	50 BU								
	0-24"		16 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES						
				Broadcast		Broadcast		Broadcast						
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION				
Phosphorus	Olsen 12 ppm	*****			N	176	N	192	N	***				
Potassium	79 ppm	*****			P ₂ O ₅	83 Broadcast	P ₂ O ₅	97 Broadcast	P ₂ O ₅	52 Broadcast				
Chloride	0-24"	*****			K ₂ O	130 Broadcast	K ₂ O	147 Broadcast	K ₂ O	84 Broadcast				
					Cl	Not Available	Cl	Not Available	Cl	0				
Sulfur	0-6" 6-24"	*****			S	0	S	0	S	0				
						B	0	B	0	B	0			
Boron	0.9 ppm	*****			Zn	4 Broadcast(Trial)	Zn	4 Broadcast(Trial)	Zn	0				
Zinc	1.22 ppm	*****			Fe	0	Fe	0	Fe	0				
Iron	51.7 ppm	*****			Mn	0	Mn	0	Mn	0				
Manganese	5.1 ppm	*****			Cu	0	Cu	0	Cu	0				
Copper	1.34 ppm	*****			Mg	0	Mg	0	Mg	0				
Magnesium	624 ppm	*****			Lime		Lime		Lime					
Calcium	5075 ppm	*****												
Sodium	48 ppm	*****												
Org.Matter	4.1 %	*****												
Carbonate(CCE)	3.7 %	*****												
Sol. Salts	0-6" 6-24"	*****			Soil pH	8.1	Buffer pH		Cation Exchange Capacity	% Base Saturation (Typical Range)				
						0-6"	8.1		31.0 meq	% Ca	% Mg	% K	% Na	% H
	0.53 mmho/cm 0.56 mmho/cm				6-24"	8.3			(65-75) 81.9	(15-20) 16.8	(1-7) 0.7	(0-5) 0.7	(0-5)	

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

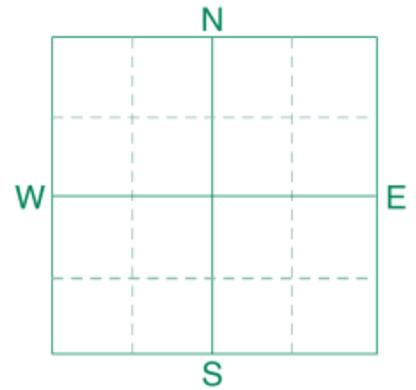
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is high based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **West of Field 1**
 SAMPLE ID
 FIELD NAME **West of Field 1**
 COUNTY
 TWP RANGE
 SECTION QTR ACRES **240**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **1896277** BOX # **0**
 LAB # **NW26870**

Date Sampled **05/01/2017**

Date Received **05/03/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans		
Nitrate	0-6" 6-24"	18 lb/ac 27 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	45 lb/ac	*****			160 BU		20 Tons		50 BU		
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
						Broadcast		Broadcast		Broadcast		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	12 ppm	*****			N	117	N	133	N	***	
Potassium		72 ppm	*****			P ₂ O ₅	83 Broadcast	P ₂ O ₅	97 Broadcast	P ₂ O ₅	52 Broadcast	
Chloride	0-24"	84 lb/ac	*****			K ₂ O	137 Broadcast	K ₂ O	152 Broadcast	K ₂ O	88 Broadcast	
Sulfur	0-6" 6-24"	34 lb/ac 66 lb/ac	*****			Cl	Not Available	Cl	Not Available	Cl	0	
Boron		0.5 ppm	*****			S	0	S	0	S	0	
Zinc		1.04 ppm	*****			B	0	B	0	B	0	
Iron		33.2 ppm	*****			Zn	2 Broadcast(Trial)	Zn	2 Broadcast(Trial)	Zn	0	
Manganese		6.1 ppm	*****			Fe	0	Fe	0	Fe	0	
Copper		0.33 ppm	*****			Mn	0	Mn	0	Mn	0	
Magnesium		335 ppm	*****			Cu	0	Cu	0	Cu	0	
Calcium		2725 ppm	*****			Mg	0	Mg	0	Mg	0	
Sodium		13 ppm	**			Lime		Lime		Lime		
Org.Matter		4.1 %	*****			Soil pH		% Base Saturation (Typical Range)				
Carbonate(CCE)		1.0 %	*****			Buffer pH	Cation Exchange Capacity	% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.25 mmho/cm 0.17 mmho/cm	***** ****			0-6" 7.6 6-24" 7.9	16.7 meq	(65-75) 81.8	(15-20) 16.8	(1-7) 1.1	(0-5) 0.3	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

Crop 1: ** Chloride yield data is limited for this crop. Nitrogen is credited 30 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: ** Chloride yield data is limited for this crop. Nitrogen is credited 30 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

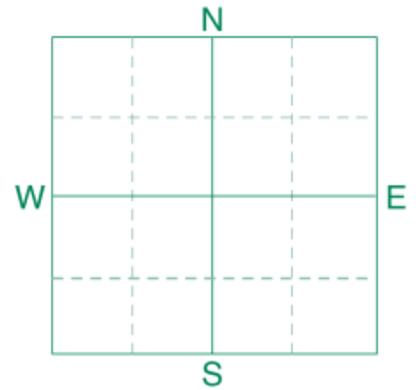
Crop 3: Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is low based on the salt and carbonate levels. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 7**
 SAMPLE ID
 FIELD NAME **Field 7**
 COUNTY **E 02-07-07E**
 TWP RANGE
 SECTION QTR ACRES **160**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **1982123** BOX # **0**

LAB # **NW63484**

Date Sampled **09/05/2017**

Date Received **09/11/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice						
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Grass/Pasture						
Nitrate	0-6" 6-24"	21 lb/ac 15 lb/ac	*****															
	0-24"	36 lb/ac																
						YIELD GOAL			YIELD GOAL						YIELD GOAL			
						175 BU			20 Tons						5 Tons			
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES						SUGGESTED GUIDELINES			
Phosphorus	Olsen	39 ppm	*****			Broadcast			Broadcast						Broadcast			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium		149 ppm	*****			N	174		N	172		N	114					
Chloride						P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0					
						K ₂ O	64	Broadcast	K ₂ O	91	Broadcast	K ₂ O	28	Broadcast				
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			Cl			Cl			Cl						
Boron						S	0		S	0		S	0					
Zinc		4.12 ppm	*****			B			B			B						
Iron						Zn	0		Zn	0		Zn	0					
Manganese						Fe			Fe			Fe						
Copper		2.2 ppm	*****			Mn			Mn			Mn						
Magnesium						Cu	0		Cu	0		Cu	0					
Calcium						Mg			Mg			Mg						
Sodium						Lime			Lime			Lime						
Org.Matter		4.5 %	*****			Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)			
Carbonate(CCE)																		
Sol. Salts	0-6"	0.76 mmho/cm	*****			0-6"	8.1											
	6-24"	0.45 mmho/cm	*****			6-24"	8.3											

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 70 K2O = 47 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

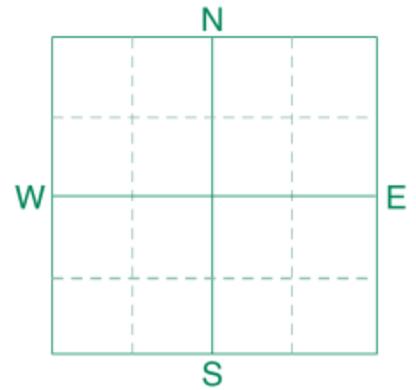
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 60 K2O = 225 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
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SOIL TEST REPORT

FIELD ID **Field 4**
 SAMPLE ID
 FIELD NAME **Field 4**
 COUNTY **SW 36-06-07E**
 TWP RANGE
 SECTION QTR ACRES **110**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152881** BOX # **0**
 LAB # **NW192983**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	35 lb/ac 66 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	101 lb/ac				165 BU		20 Tons		50 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen	49 ppm				N	97	N	107	N	***			
Potassium		145 ppm				P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0			
Chloride						K ₂ O	65 Broadcast	K ₂ O	94 Broadcast	K ₂ O	45 Broadcast			
Sulfur	0-6" 6-24"	50 lb/ac 48 lb/ac				Cl		Cl		Cl				
Boron						S	0	S	0	S	0			
Zinc		5.75 ppm				B		B		B				
Iron						Zn	0	Zn	0	Zn	0			
Manganese						Fe		Fe		Fe				
Copper		3.16 ppm				Mn		Mn		Mn				
Magnesium						Cu	0	Cu	0	Cu	0			
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter		2.7 %				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH		Capacity		% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.26 mmho/cm 0.19 mmho/cm	*****			0-6" 8.1								
			****			6-24" 8.4								

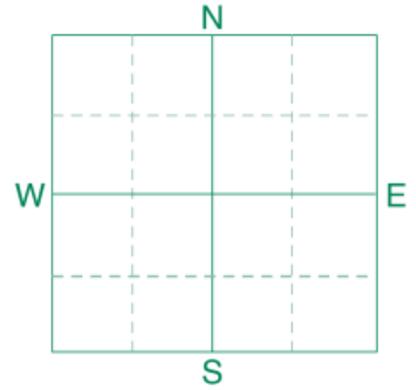
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 3**
 SAMPLE ID
 FIELD NAME **Field 3**
 COUNTY **N 35-06-07E**
 TWP RANGE
 SECTION QTR ACRES **290**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152882** BOX # **0**
 LAB # **NW192995**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	26 lb/ac 42 lb/ac	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24"	68 lb/ac					165 BU		20 Tons		50 BU			
							SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
							Broadcast		Broadcast		Broadcast			
							LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	30 ppm	*****				N	130	N	140	N	***			
Potassium	80 ppm	*****				P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0			
Chloride						K ₂ O	133 Broadcast	K ₂ O	146 Broadcast	K ₂ O	84 Broadcast			
Sulfur	0-6" 6-24"	34 lb/ac 60 lb/ac	*****				Cl		Cl		Cl			
Boron							S	0	S	0	S	0		
Zinc	4.01 ppm	*****				B		B		B				
Iron						Zn	0	Zn	0	Zn	0			
Manganese						Fe		Fe		Fe				
Copper	2.19 ppm	*****				Mn		Mn		Mn				
Magnesium						Cu	0	Cu	0	Cu	0			
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter	4.0 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.25 mmho/cm 0.19 mmho/cm	*****				0-6" 8.0							
			****				6-24" 8.3							

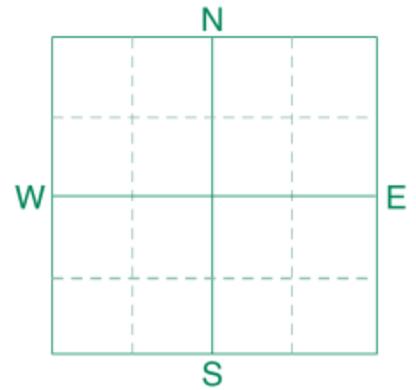
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 1**
 SAMPLE ID
 FIELD NAME **Field 1**
 COUNTY **E 03-07-07E**
 TWP RANGE
 SECTION QTR ACRES **240**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152883** BOX # **0**
 LAB # **NW192987**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	39 lb/ac 57 lb/ac					165 BU	20 Tons	50 BU						
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	96 lb/ac					Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	Olsen					N	102	N	112	N	***			
Phosphorus	40 ppm					P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0			
Potassium	100 ppm					K ₂ O	112 Broadcast	K ₂ O	130 Broadcast	K ₂ O	72 Broadcast			
Chloride						Cl		Cl		Cl				
Sulfur	0-6" 6-24"					S	0	S	0	S	0			
Boron						B		B		B				
Zinc	4.32 ppm					Zn	0	Zn	0	Zn	0			
Iron						Fe		Fe		Fe				
Manganese						Mn		Mn		Mn				
Copper	2.39 ppm					Cu	0	Cu	0	Cu	0			
Magnesium						Mg		Mg		Mg				
Calcium						Lime		Lime		Lime				
Sodium														
Org.Matter	3.5 %					Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"					0-6" 7.9								
	0.36 mmho/cm 0.26 mmho/cm					6-24" 8.1								

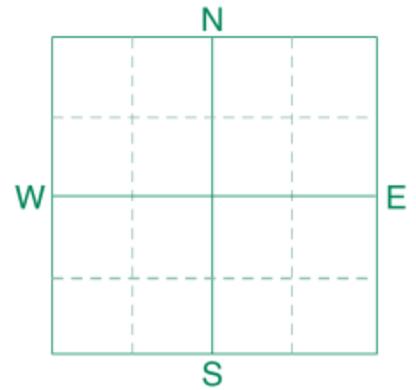
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
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 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 9**
 SAMPLE ID
 FIELD NAME **Field 9**
 COUNTY **SE 11-07-07E**
 TWP RANGE
 SECTION QTR ACRES **70**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152884** BOX # **0**
 LAB # **NW192865**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans			
Nitrate	0-6" 6-24"	29 lb/ac 33 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL		
	0-24"	62 lb/ac				165 BU	20 Tons	50 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						Broadcast	Broadcast	Broadcast	Broadcast	Broadcast	Broadcast		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen	32 ppm	*****			N 136		N 146		N ***			
Potassium		70 ppm	*****			P ₂ O ₅ 15	Band (2x2) *	P ₂ O ₅ 15	Band (2x2) *	P ₂ O ₅ 0			
Chloride						K ₂ O 144	Broadcast	K ₂ O 154	Broadcast	K ₂ O 90	Broadcast		
Sulfur	0-6" 6-24"	48 lb/ac 96 lb/ac	*****			Cl		Cl		Cl			
Boron						S 0		S 0		S 0			
Zinc		3.96 ppm	*****			B		B		B			
Iron						Zn 0		Zn 0		Zn 0			
Manganese						Fe		Fe		Fe			
Copper		1.47 ppm	*****			Mn		Mn		Mn			
Magnesium						Cu 0		Cu 0		Cu 0			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter		4.4 %	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
Carbonate(CCE)									% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.26 mmho/cm 0.2 mmho/cm	*****			0-6" 7.8							
			*****			6-24" 8.2							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K20 = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

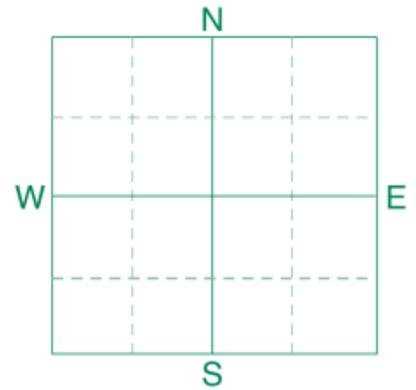
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K20 = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 10**
 SAMPLE ID
 FIELD NAME **Field 10**
 COUNTY **W 01-07-07E**
 TWP RANGE
 SECTION QTR ACRES **180**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152885** BOX # **0**
 LAB # **NW192984**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans		
Nitrate	0-6" 6-24"	45 lb/ac 90 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	135 lb/ac				165 BU		20 Tons		50 BU		
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
						Broadcast		Broadcast		Broadcast		
	Olsen	50 ppm				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus					N	63		N	73	N	***	
Potassium		105 ppm			P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	15	P ₂ O ₅	0	
Chloride					K ₂ O	107	Broadcast	K ₂ O	126	K ₂ O	69	
					Cl			Cl		Cl		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac			S	0		S	0	S	0	
Boron					B			B		B		
Zinc		6.28 ppm			Zn	0		Zn	0	Zn	0	
Iron					Fe			Fe		Fe		
Manganese					Mn			Mn		Mn		
Copper		2.86 ppm			Cu	0		Cu	0	Cu	0	
Magnesium					Mg			Mg		Mg		
Calcium					Lime			Lime		Lime		
Sodium												
Org.Matter		5.1 %										
Carbonate(CCE)												
	0-6" 6-24"	0.67 mmho/cm 0.8 mmho/cm										
Sol. Salts												
					Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
								% Ca	% Mg	% K	% Na	% H
					0-6" 7.8							
					6-24" 7.8							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

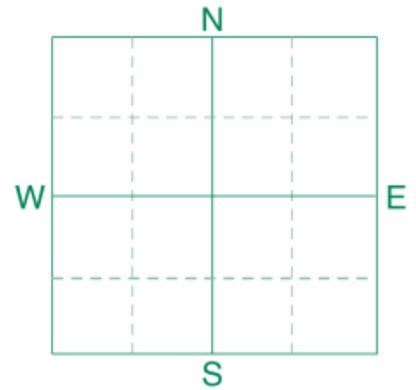
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
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SOIL TEST REPORT

FIELD ID **Field 5**
 SAMPLE ID
 FIELD NAME **Field 5**
 COUNTY **NW 36-06-07E**
 TWP RANGE
 SECTION QTR ACRES **110**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152886** BOX # **0**
 LAB # **NW192998**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice						
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans						
Nitrate	0-6" 6-24"	35 lb/ac 48 lb/ac					YIELD GOAL			YIELD GOAL			YIELD GOAL					
	0-24"	83 lb/ac					165 BU			20 Tons			50 BU					
							SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES					
							Broadcast			Broadcast			Broadcast					
							LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION				
Phosphorus	Olsen	24 ppm					N	115		N	125		N	***				
Potassium		140 ppm					P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	30	Broadcast	P ₂ O ₅	0				
Chloride							K ₂ O	70	Broadcast	K ₂ O	98	Broadcast	K ₂ O	48	Broadcast			
Sulfur	0-6" 6-24"	118 lb/ac 294 lb/ac					Cl			Cl			Cl					
Boron							S	0		S	0		S	0				
Zinc		4.56 ppm					B			B			B					
Iron							Zn	0		Zn	0		Zn	0				
Manganese							Fe			Fe			Fe					
Copper		1.61 ppm					Mn			Mn			Mn					
Magnesium							Cu	0		Cu	0		Cu	0				
Calcium							Mg			Mg			Mg					
Sodium							Lime			Lime			Lime					
Org.Matter		6.1 %					Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Carbonate(CCE)																		
Sol. Salts	0-6" 6-24"	0.65 mmho/cm 0.61 mmho/cm					0-6" 8.1 6-24" 8.1											

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

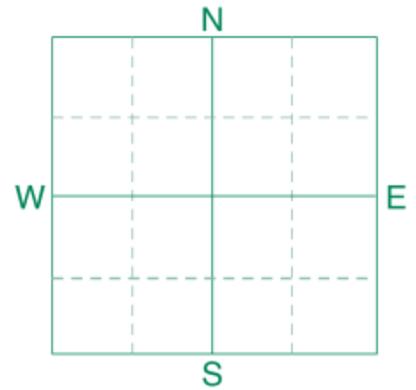
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
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SOIL TEST REPORT

FIELD ID **Field 6**
 SAMPLE ID
 FIELD NAME **Field 6**
 COUNTY **NE 36-06-07E**
 TWP RANGE
 SECTION QTR ACRES **100**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152887** BOX # **0**
 LAB # **NW192986**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	6-24"					47 lb/ac	42 lb/ac	165 BU	20 Tons	50 BU				
	0-24"					89 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
							Broadcast		Broadcast		Broadcast			
	Olsen	30 ppm	*****			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus		95 ppm	*****			N	109	N	119	N	***			
Potassium			*****			P ₂ O ₅	15	P ₂ O ₅	15	P ₂ O ₅	0			
Chloride			*****			K ₂ O	117	K ₂ O	134	K ₂ O	75			
	0-6"	76 lb/ac	*****			Cl		Cl		Cl				
	6-24"	114 lb/ac	*****			S	0	S	0	S	0			
Sulfur			*****			B		B		B				
Boron			*****			Zn	0	Zn	0	Zn	0			
Zinc		3.39 ppm	*****			Fe		Fe		Fe				
Iron			*****			Mn		Mn		Mn				
Manganese			*****			Cu	0	Cu	0	Cu	0			
Copper		0.75 ppm	*****			Mg		Mg		Mg				
Magnesium			*****			Lime		Lime		Lime				
Calcium			*****			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Sodium		4.2 %	*****			Buffer pH				% Ca	% Mg	% K	% Na	% H
Org.Matter			*****			0-6"	7.7							
Carbonate(CCE)			*****			6-24"	8.0							
Sol. Salts	0-6"	0.53 mmho/cm	*****											
	6-24"	0.27 mmho/cm	*****											

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

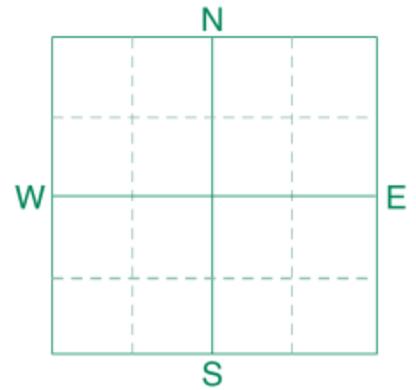
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
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SOIL TEST REPORT

FIELD ID **Field 11**
 SAMPLE ID
 FIELD NAME **Field 11**
 COUNTY **SW 06-07-08E**
 TWP RANGE
 SECTION QTR ACRES **150**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152888** BOX # **0**
 LAB # **NW192977**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice						
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans						
Nitrate	0-6" 6-24"	36 lb/ac 54 lb/ac					YIELD GOAL			YIELD GOAL			YIELD GOAL					
	0-24"	90 lb/ac					165 BU			20 Tons			50 BU					
							SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES					
							Broadcast			Broadcast			Broadcast					
							LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION				
Phosphorus	Olsen	49 ppm					N	108		N	118		N	***				
Potassium		196 ppm					P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0				
Chloride							K ₂ O	11	Broadcast	K ₂ O	53	Broadcast	K ₂ O	0				
Sulfur	0-6" 6-24"	96 lb/ac 240 lb/ac					Cl			Cl			Cl					
Boron							S	0		S	0		S	0				
Zinc		4.40 ppm					B			B			B					
Iron							Zn	0		Zn	0		Zn	0				
Manganese							Fe			Fe			Fe					
Copper		0.94 ppm					Mn			Mn			Mn					
Magnesium							Cu	0		Cu	0		Cu	0				
Calcium							Mg			Mg			Mg					
Sodium							Lime			Lime			Lime					
Org.Matter		4.3 %					Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Carbonate(CCE)																		
Sol. Salts	0-6" 6-24"	0.4 mmho/cm 0.36 mmho/cm					0-6" 8.2 6-24" 8.4											

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

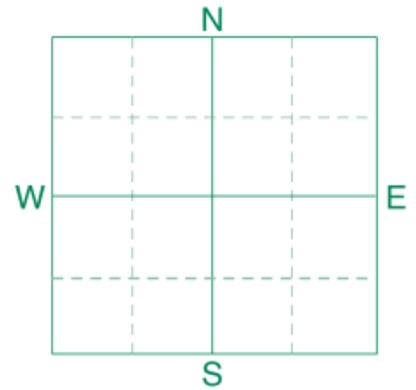
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 13A**
 SAMPLE ID
 FIELD NAME **Field 13A**
 COUNTY **NW 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **130**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152889** BOX # **0**
 LAB # **NW192996**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans			
Nitrate	0-6" 6-24"	21 lb/ac 21 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL		
	0-24"	42 lb/ac				165 BU	20 Tons	50 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						Broadcast	Broadcast	Broadcast	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	23 ppm	*****			N 156	N 166	N ***					
Potassium		129 ppm	*****			P ₂ O ₅ 20 Broadcast	P ₂ O ₅ 35 Broadcast	P ₂ O ₅ 0					
Chloride						K ₂ O 82 Broadcast	K ₂ O 107 Broadcast	K ₂ O 54 Broadcast					
Sulfur	0-6" 6-24"	42 lb/ac 72 lb/ac	*****			Cl	Cl	Cl					
Boron						S 0	S 0	S 0					
Zinc		1.54 ppm	*****			B	B	B					
Iron						Zn 2 Broadcast(Trial)	Zn 2 Broadcast(Trial)	Zn 0					
Manganese						Fe	Fe	Fe					
Copper		0.51 ppm	*****			Mn	Mn	Mn					
Magnesium						Cu 0	Cu 0	Cu 0					
Calcium						Mg	Mg	Mg					
Sodium						Lime	Lime	Lime					
Org.Matter		3.8 %	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
Carbonate(CCE)									% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.31 mmho/cm 0.2 mmho/cm	*****			0-6" 8.0							
			*****			6-24" 8.2							

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

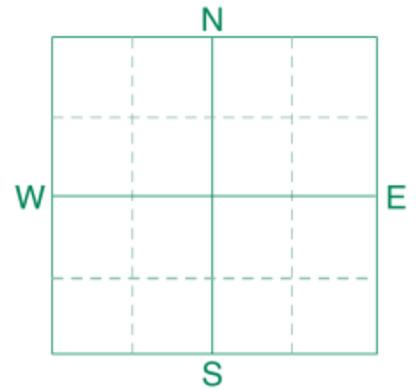
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 13B**
 SAMPLE ID
 FIELD NAME **Field 13B**
 COUNTY **NE 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **80**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152890** BOX # **0**
 LAB # **NW192974**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans		
Nitrate	0-6" 6-24"	27 lb/ac 33 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	60 lb/ac				165 BU		20 Tons		50 BU		
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
						Broadcast		Broadcast		Broadcast		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	7 ppm				N	138	N	148	N	***	
Potassium		48 ppm				P ₂ O ₅	115 Broadcast	P ₂ O ₅	125 Broadcast	P ₂ O ₅	72 Broadcast	
Chloride						K ₂ O	167 Broadcast	K ₂ O	172 Broadcast	K ₂ O	103 Broadcast	
Sulfur	0-6" 6-24"	100 lb/ac 186 lb/ac				Cl		Cl		Cl		
Boron						S	0	S	0	S	0	
Zinc		1.09 ppm				B		B		B		
Iron						Zn	2 Broadcast(Trial)	Zn	2 Broadcast(Trial)	Zn	0	
Manganese						Fe		Fe		Fe		
Copper		0.46 ppm				Mn		Mn		Mn		
Magnesium						Cu	0	Cu	0	Cu	0	
Calcium						Mg		Mg		Mg		
Sodium						Lime		Lime		Lime		
Org.Matter		5.3 %				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)						Buffer pH		% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.43 mmho/cm 0.26 mmho/cm				0-6" 8.0 6-24" 8.2						

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

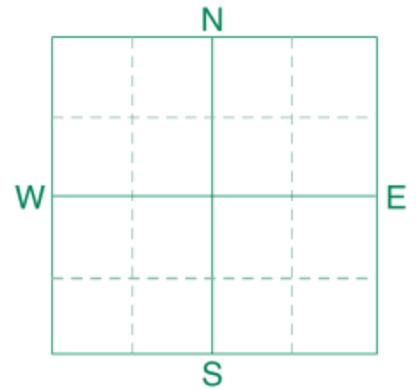
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 15**
 SAMPLE ID
 FIELD NAME **Field 15**
 COUNTY **E04-07-08E**
 TWP RANGE
 SECTION QTR ACRES **180**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152891** BOX # **0**
 LAB # **NW192989**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	29 lb/ac 60 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	89 lb/ac				165 BU		20 Tons		50 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen	37 ppm				N	109	N	119	N	***			
Potassium		97 ppm				P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0			
Chloride						K ₂ O	115 Broadcast	K ₂ O	132 Broadcast	K ₂ O	73 Broadcast			
Sulfur	0-6" 6-24"	90 lb/ac 90 lb/ac				Cl		Cl		Cl				
Boron						S	0	S	0	S	0			
Zinc		2.20 ppm				B		B		B				
Iron						Zn	0	Zn	0	Zn	0			
Manganese						Fe		Fe		Fe				
Copper		0.57 ppm				Mn		Mn		Mn				
Magnesium						Cu	0	Cu	0	Cu	0			
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter		4.8 %				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.45 mmho/cm 0.27 mmho/cm				0-6" 7.9 6-24" 8.1								

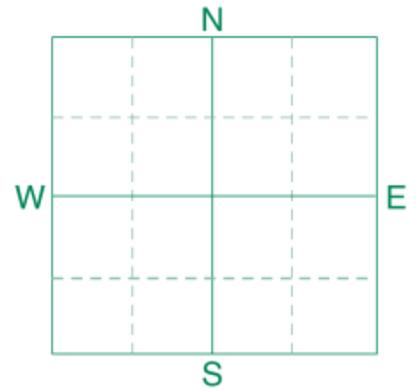
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 12**
 SAMPLE ID
 FIELD NAME **Field 12**
 COUNTY **S 05-07-08E**
 TWP RANGE
 SECTION QTR ACRES **160**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152892** BOX # **0**
 LAB # **NW192982**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	41 lb/ac 45 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	86 lb/ac				165 BU		20 Tons		50 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen	17 ppm				N	112	N	122	N	***			
Potassium		84 ppm				P ₂ O ₅	56 Broadcast	P ₂ O ₅	69 Broadcast	P ₂ O ₅	32 Broadcast			
Chloride						K ₂ O	129 Broadcast	K ₂ O	143 Broadcast	K ₂ O	81 Broadcast			
Sulfur	0-6" 6-24"	62 lb/ac 90 lb/ac				Cl		Cl		Cl				
Boron						S	0	S	0	S	0			
Zinc		1.61 ppm				B		B		B				
Iron						Zn	4 Broadcast(Trial)	Zn	4 Broadcast(Trial)	Zn	0			
Manganese						Fe		Fe		Fe				
Copper		0.68 ppm				Mn		Mn		Mn				
Magnesium						Cu	0	Cu	0	Cu	0			
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter		4.5 %				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH		Capacity		% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.44 mmho/cm 0.31 mmho/cm				0-6" 8.1 6-24" 8.4								

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

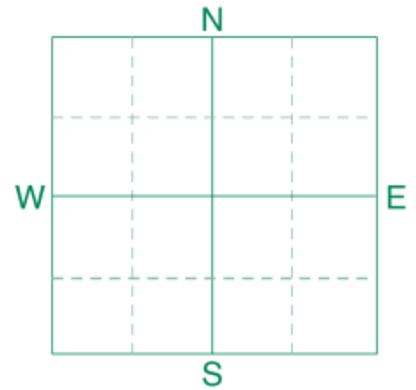
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 20**
 SAMPLE ID
 FIELD NAME **Field 20**
 COUNTY **NW 03-07-07E**
 TWP RANGE
 SECTION QTR ACRES **0**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2152893** BOX # **0**
 LAB # **NW192978**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans				
Nitrate	0-6" 6-24"	30 lb/ac	24 lb/ac	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL		
	0-24"	54 lb/ac					165 BU			20 Tons			50 BU			
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Broadcast			Broadcast			Broadcast				
Olsen		10 ppm	*****				LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		
Phosphorus		94 ppm	*****				N	144		N	154		N	***		
Potassium							P ₂ O ₅	97	Broadcast	P ₂ O ₅	108	Broadcast	P ₂ O ₅	60	Broadcast	
Chloride							K ₂ O	119	Broadcast	K ₂ O	135	Broadcast	K ₂ O	75	Broadcast	
Sulfur	0-6" 6-24"	34 lb/ac	96 lb/ac	*****				Cl		Cl		Cl				
Boron							S	0		S	0		S	0		
Zinc		0.87 ppm	*****				B			B			B			
Iron							Zn	5	Broadcast	Zn	5	Broadcast	Zn	2	Broadcast	
Manganese							Fe			Fe			Fe			
Copper		0.51 ppm	*****				Mn			Mn			Mn			
Magnesium							Cu	0		Cu	0		Cu	0		
Calcium							Mg			Mg			Mg			
Sodium							Lime			Lime			Lime			
Org.Matter		3.7 %	*****				Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)			
Carbonate(CCE)							Buffer pH			% Ca	% Mg	% K	% Na	% H		
Sol. Salts	0-6" 6-24"	0.43 mmho/cm	0.21 mmho/cm	*****				0-6" 7.9								
				*****				6-24" 8.1								

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 66 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

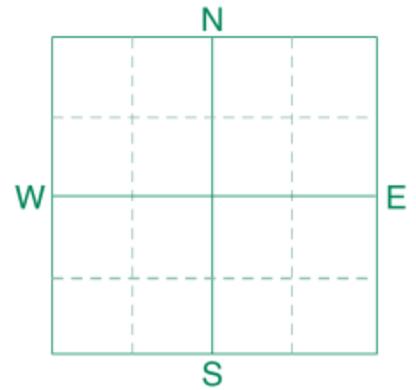
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 21**
 SAMPLE ID
 FIELD NAME **Field 21**
 COUNTY **NW 11-07-07E**
 TWP RANGE
 SECTION QTR ACRES **0**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2152894** BOX # **0**
 LAB # **NW192992**

Date Sampled **11/02/2017**

Date Received **11/07/2017**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice			
		VLow	Low	Med	High	Corn-Grain			Corn-Silage			Soybeans			
Nitrate	0-6" 6-24"	17 lb/ac 15 lb/ac	*****												
	0-24"	32 lb/ac													
						YIELD GOAL	YIELD GOAL	YIELD GOAL	165 BU	20 Tons	50 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	
						Broadcast	Broadcast	Broadcast							
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	6 ppm	*****			N	166		N	176		N	***			
Phosphorus					P ₂ O ₅	121	Broadcast	P ₂ O ₅	130	Broadcast	P ₂ O ₅	76	Broadcast		
Potassium	41 ppm	*****			K ₂ O	175	Broadcast	K ₂ O	177	Broadcast	K ₂ O	107	Broadcast		
Chloride					Cl			Cl			Cl				
Sulfur	0-6" 6-24"	40 lb/ac 66 lb/ac	*****		S	0		S	0		S	0			
Boron					B			B			B				
Zinc	0.49 ppm	*****			Zn	10	Broadcast	Zn	10	Broadcast	Zn	6	Broadcast		
Iron					Fe			Fe			Fe				
Manganese					Mn			Mn			Mn				
Copper	0.44 ppm	*****			Cu	0		Cu	0		Cu	0			
Magnesium					Mg			Mg			Mg				
Calcium					Lime			Lime			Lime				
Sodium															
Org.Matter	3.6 %	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)							
Carbonate(CCE)								% Ca	% Mg	% K	% Na	% H			
Sol. Salts	0-6" 6-24"	0.29 mmho/cm 0.18 mmho/cm	***** ****		0-6" 8.2										
					6-24" 8.4										

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 66 K20 = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

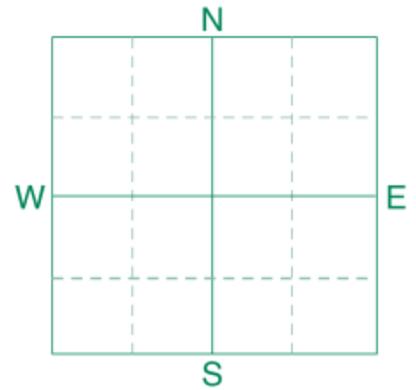
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K20 = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 1**
 SAMPLE ID
 FIELD NAME **Field 1**
 COUNTY **E 03-07-07E**
 TWP RANGE
 SECTION QTR ACRES **240**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2357483** BOX # **2787**
 LAB # **NW64996**

Date Sampled **09/06/2018**

Date Received **09/10/2018**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High	Corn-Grain		Corn-Silage		Soybeans					
Nitrate	0-6" 6-24"	18 lb/ac 36 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL				
	0-24"	54 lb/ac				170 BU	20 Tons	50 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES				
						Broadcast	Broadcast	Broadcast	Broadcast	Broadcast	Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION				
Phosphorus	Olsen	18 ppm	*****			N 150		N 154		N ***					
Potassium		111 ppm	*****			P ₂ O ₅ 51	Broadcast	P ₂ O ₅ 63	Broadcast	P ₂ O ₅ 28	Broadcast				
Chloride						K ₂ O 104	Broadcast	K ₂ O 121	Broadcast	K ₂ O 65	Broadcast				
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			Cl		Cl		Cl					
Boron						S 0		S 0		S 0					
Zinc		1.90 ppm	*****			B		B		B					
Iron						Zn 4	Broadcast(Trial)	Zn 4	Broadcast(Trial)	Zn 0					
Manganese						Fe		Fe		Fe					
Copper		1.66 ppm	*****			Mn		Mn		Mn					
Magnesium						Cu 0		Cu 0		Cu 0					
Calcium						Mg		Mg		Mg					
Sodium						Lime		Lime		Lime					
Org.Matter		3.1 %	*****			Soil pH		Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)										% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	0.42 mmho/cm 0.35 mmho/cm	*****			0-6" 8.1									
			*****			6-24" 8.2									

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 68 K2O = 46 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

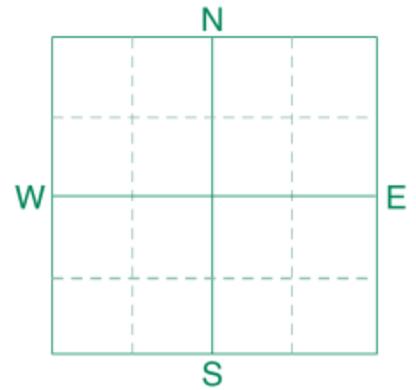
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 3**
 SAMPLE ID
 FIELD NAME **Field 3**
 COUNTY **N 35-06-07E**
 TWP RANGE
 SECTION QTR ACRES **290**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

ROA OVO

REF # **2499269** BOX # **3812**
 LAB # **NW164922**

Date Sampled **10/26/2018**

Date Received **10/30/2018**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Rye		Corn-Silage		Soybeans				
Nitrate	0-6" 6-24"	15 lb/ac 36 lb/ac	*****			YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	51 lb/ac				60 BU		18 Tons		50 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen	33 ppm	*****			N	93	N	136	N	***			
Potassium		94 ppm	*****			P ₂ O ₅	15	P ₂ O ₅	15	P ₂ O ₅	0			
Chloride							Band (Starter)*		Band (2x2) *					
						K ₂ O	83	K ₂ O	121	K ₂ O	75			
							Broadcast		Broadcast		Broadcast			
Sulfur	0-6" 6-24"	32 lb/ac 66 lb/ac	*****			Cl		Cl		Cl				
Boron						S	0	S	0	S	0			
Zinc		4.44 ppm	*****			B		B		B				
Iron						Zn	0	Zn	0	Zn	0			
Manganese						Fe		Fe		Fe				
Copper		2.08 ppm	*****			Mn		Mn		Mn				
Magnesium						Cu	0	Cu	0	Cu	0			
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter		2.9 %	*****			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.24 mmho/cm 0.21 mmho/cm	*****			0-6" 8.1								
			*****			6-24" 8.3								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 65 K2O = 149 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

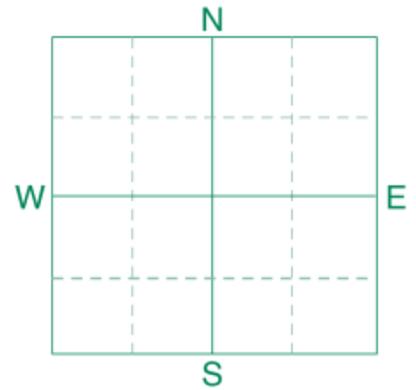
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Field 14**
 SAMPLE ID
 FIELD NAME **Field 14**
 COUNTY **04-07-08E**
 TWP RANGE
 SECTION QTR ACRES **280**
 PREV. CROP **Grass/Alfalfa**



SUBMITTED FOR:
ELBI

La Broquerie, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **ROA OVO**

REF # **2499270** BOX # **3860**
 LAB # **NW164934**

Date Sampled **10/26/2018**

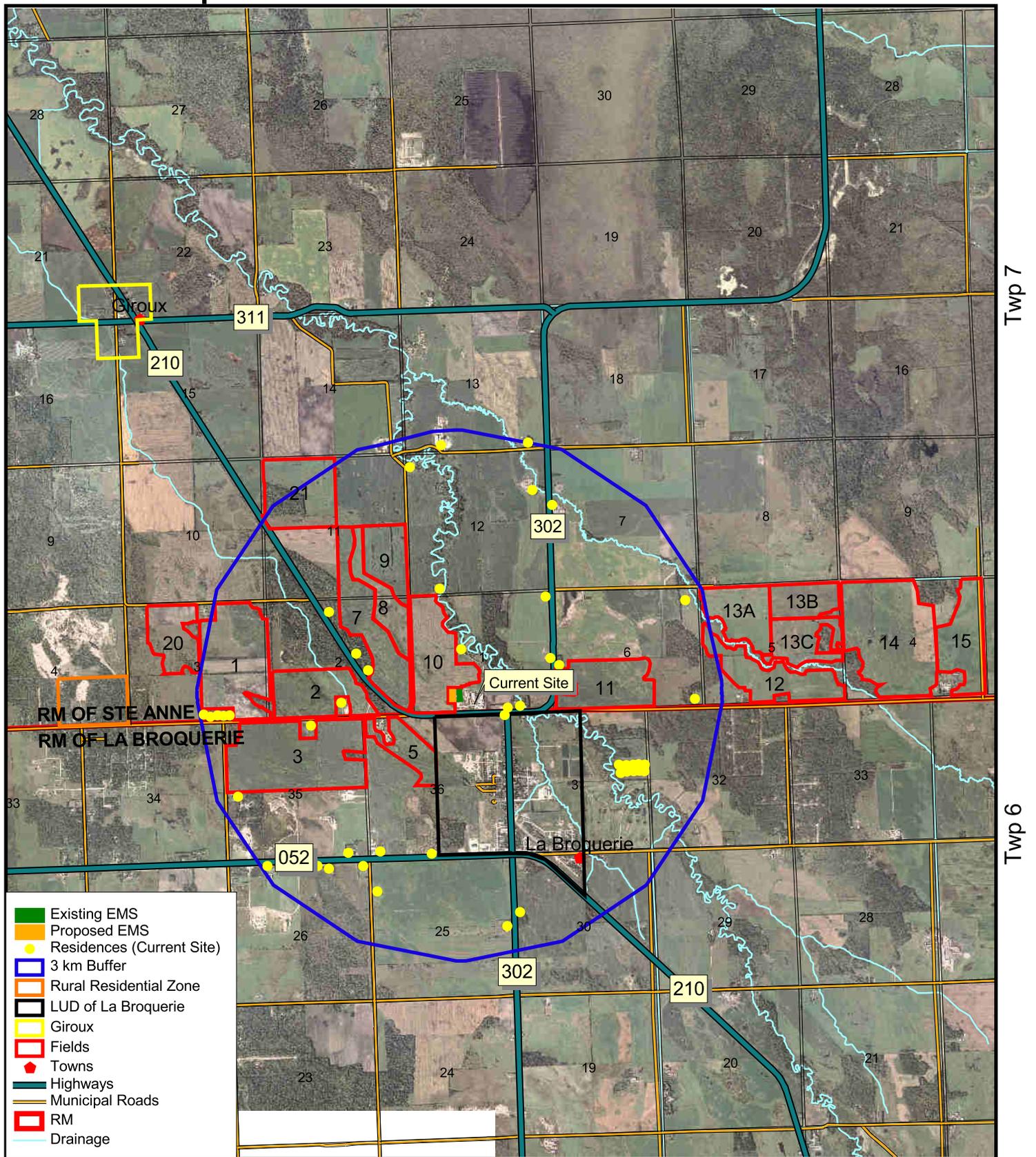
Date Received **10/30/2018**

Date Reported **11/19/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Rye			Corn-Silage			Soybeans		
Nitrate	0-6" 6-24"	21 lb/ac 15 lb/ac	*****			YIELD GOAL			YIELD GOAL			YIELD GOAL		
	0-24"	36 lb/ac				60 BU			20 Tons			50 BU		
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
						Broadcast			Broadcast			Broadcast		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Phosphorus	Olsen	33 ppm	*****			N	108		N	172		N	***	
Potassium		85 ppm	*****			P ₂ O ₅	15	Band (Starter)*	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0	
Chloride						K ₂ O	91	Broadcast	K ₂ O	142	Broadcast	K ₂ O	81	Broadcast
Sulfur	0-6" 6-24"	68 lb/ac 60 lb/ac	*****			Cl			Cl			Cl		
Boron						S	0		S	0		S	0	
Zinc		2.39 ppm	*****			B			B			B		
Iron						Zn	0		Zn	0		Zn	0	
Manganese						Fe			Fe			Fe		
Copper		0.56 ppm	*****			Mn			Mn			Mn		
Magnesium						Cu	0		Cu	0		Cu	0	
Calcium						Mg			Mg			Mg		
Sodium						Lime			Lime			Lime		
Org.Matter		3.8 %	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
Carbonate(CCE)									% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	0.34 mmho/cm 0.16 mmho/cm	***** ****			0-6" 8.0								
						6-24" 8.2								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

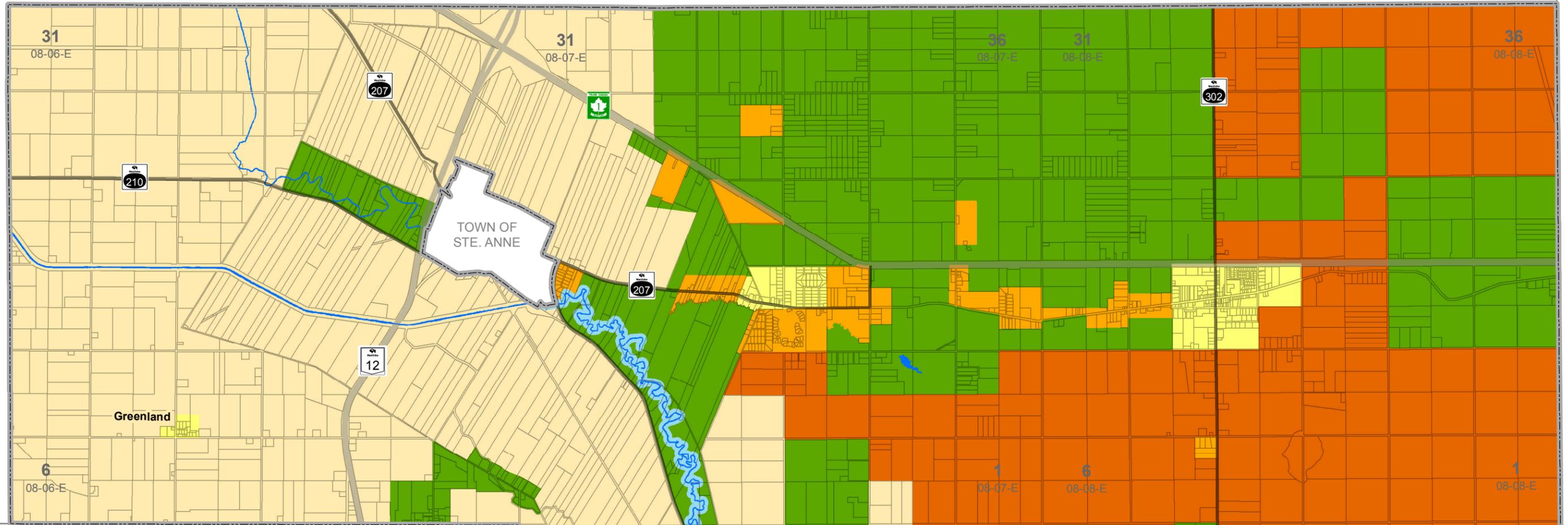
Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc. Land Use & Spread Fields



0 1 Miles
1:60000

Data Sources:
Fields drawn by Tone Ag in consultation with landowner, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website

N
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T·A·C
TONE AG CONSULTING
2019-09-03



RURAL MUNICIPALITY OF STE. ANNE

DEVELOPMENT PLAN BY-LAW NO. 13-2007

-  Rural Agriculture Area
-  Rural Mixed Use Area
-  Rural Natural Area
-  Rural Residential Area
-  Settlement Centre
-  Environmental Protection Area
-  Provincial Trunk Highway
-  Provincial Road



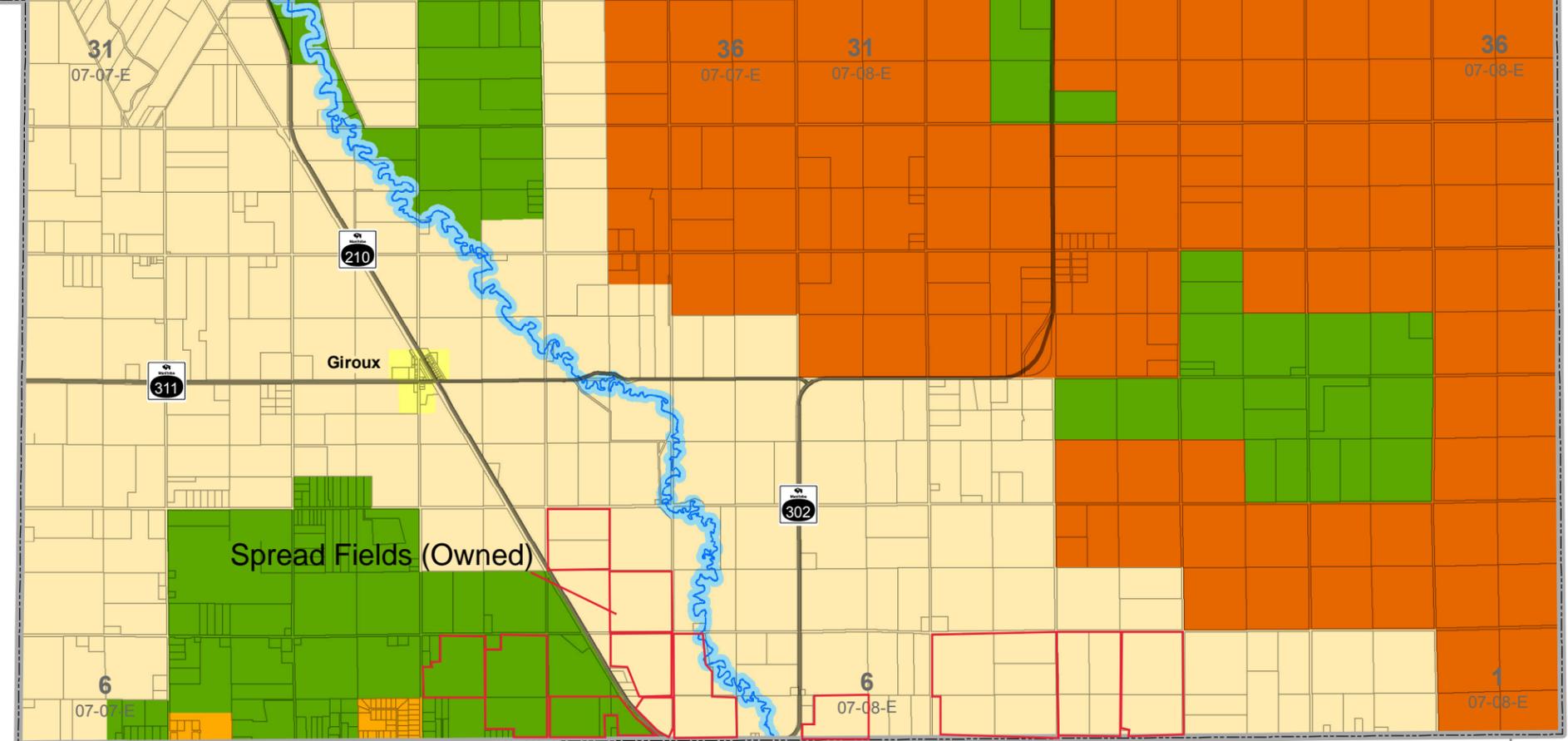
Kilometers



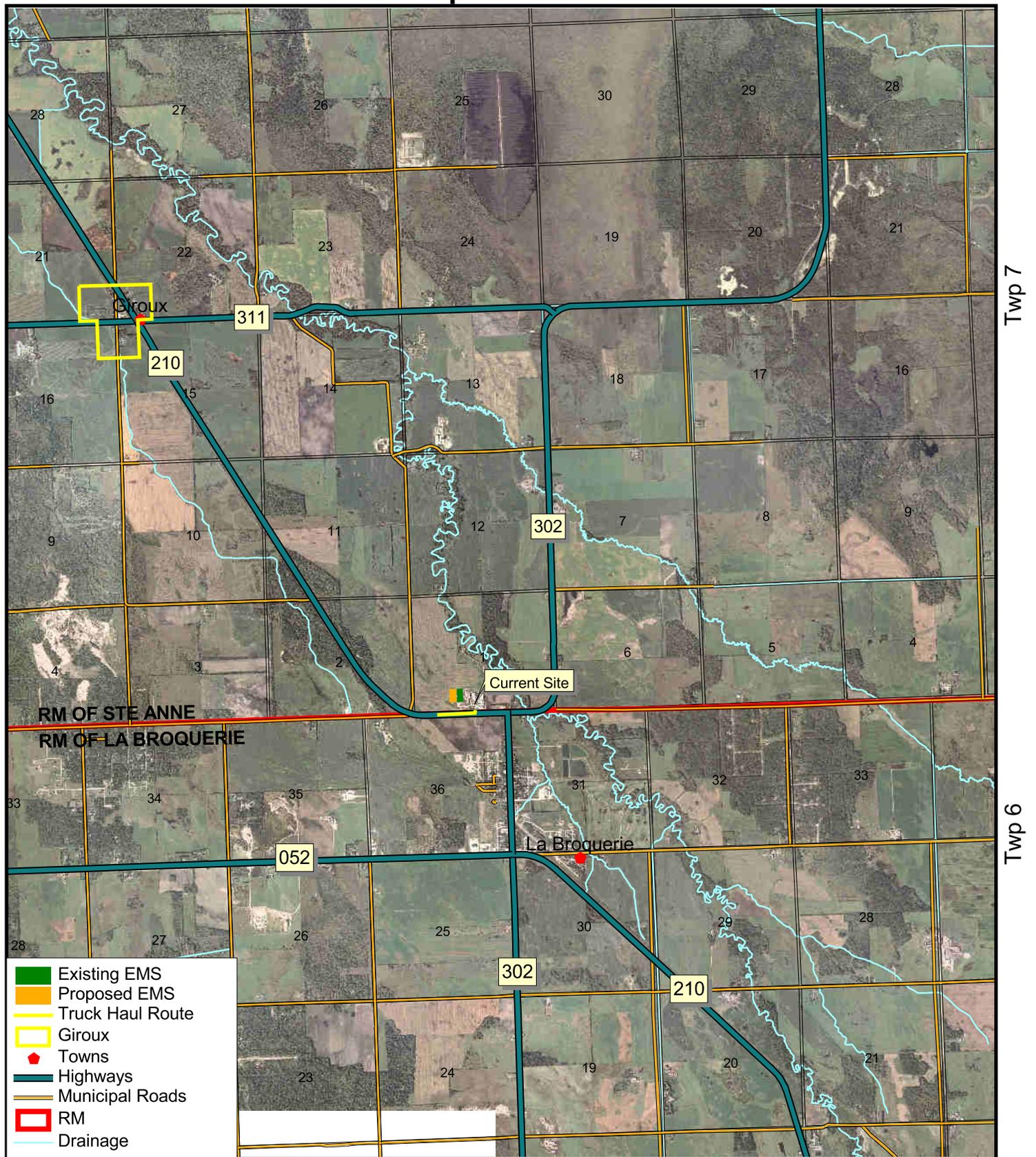
Miles



OFFICE CONSOLIDATION
UP TO AND INCLUDING
BY-LAW No. 01-2014
June 5, 2014



Enterprises Louis Balcaen Ltd./Liesveld Holsteins Inc. Truck Haul Route & Access Map



Twp 7

Twp 6

Rge. 7E

Rge. 8E



Data Sources:
Fields drawn by Tone Ag in consultation with landowner, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website



2019-09-03

From: "Murray, Colin (SD)" <Colin.Murray@gov.mb.ca>
Date: August 9, 2019 at 3:04:30 PM CDT
To: "ibsawka@shaw.ca" <ibsawka@shaw.ca>
Subject: Data request B Sawka Inc 20190809 SW-01-007-07E1 Dairy expansion Ste Anne

Hi Bill

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's (CDC) rare species database for your area of interest. This includes the primary locations:
 SW-01-007-07E1; and a two kilometer radius buffer from the edge of the location boundary.

The search resulted in the following occurrences:

1. Within the footprint or primary location(s):
 No listed or tracked species occurrences found at this time.

2. Within 2km of the footprint boundary:

TAXGROUP	SCINAME	COMNAME	SRANK	ESEA	SARA	COSEWIC
Vertebrate Animal	Chaetura pelagica	(Chimney Swift)	S2B	Threatened	Threatened	Threatened
Vertebrate Animal	Lithobates pipiens	(Northern Leopard Frog)	S4	NA	Special Concern	Special Concern

3. General area records low locational accuracy:
 None found.

4. Found in broader area and similar habitat:

TAXGROUP	SCINAME	COMNAME	SRANK	ESEA	SARA	COSEWIC
Vertebrate Animal	Contopus virens	(Eastern Wood-pewee)	S4B	NA	Special Concern	Special Concern
Vascular Plant	Solidago riddellii	(Riddell's Goldenrod)	S2S3	Threatened	Special Concern	Special Concern
Vascular Plant	Agalinis tenuifolia	(Narrow-leaved Agalinis)	S2S3	NA	NA	NA

Further information on this ranking system can be found on our website at: <http://www.natureserve.org/conservation-tools/conservation-status-assessment>.
 These designations can be found at:
<http://web2.gov.mb.ca/laws/statutes/ccsm/e111e.php>,
<https://www.canada.ca/en/environment-climate-change/services/committee-status-endangered-wildlife.html> and
<http://www.sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1>.

Manitoba's recommended setback distances can be found at: https://www.gov.mb.ca/sd/pubs/conservation-data-centre/mbcdc_bird_setbacks.pdf.
 The information provided in this letter is based on existing data known to the Manitoba CDC of the Wildlife and Fisheries Branch at the time of the request. These data are dependent on the research and observations of CDC staff and others who have shared their data, and reflect our current state of knowledge. **An absence of data does not confirm the absence of any rare or endangered species.** Many areas of the province have never been thoroughly surveyed, however, and the absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. The information should, therefore, not be regarded as a final statement on the occurrence of any species of concern nor should it substitute for on-site surveys for species or environmental assessments. Also, because our Biotics database is continually updated and because information requests are evaluated by type of action, any given response is only appropriate for its respective request.

Please contact the Manitoba CDC for an update on this natural heritage information if more than six months passes before it is utilised.

Third party requests for products wholly or partially derived from the Biotics database must be approved by the Manitoba CDC before information is released. Once approved, the primary user will identify the Manitoba CDC as data contributors on any map or publication using data from our database, as the Manitoba Conservation Data Centre; Wildlife and Fisheries Branch, Manitoba Sustainable Development.

This letter is for information purposes only - it does not constitute consent or approval of the proposed project or activity, nor does it negate the need for any permits or approvals required by the Province of Manitoba.

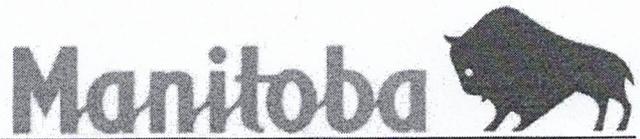
We would be interested in receiving a copy of the results of any field surveys that you may undertake, to update our database with the most current knowledge of the area.

If you have any questions or require further information contact me directly at (204) 945-7760.

Colin

2019 Jul 29

WELL INFORMATION REPORT



Well PID: 110816

Location: SW1-7-7E

UTMX:679447.8 UTM Y:5489944.2 XY Accuracy:No Accuracy

Owner: ENTERPRISES LOUIS BALCAEN INC

Driller: Echo Drilling Ltd.

Well Name:

Date Completed: 1998 Dec 03

Well Use: PRODUCTION

WATER USE: Domestic, Livestock

Well Status: ACTIVE Aquifer: LIMESTONE OR DOLOMITE

REMARKS:

ESTIMATED PUMPING RATE W/ AIR

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	1	TOPSOIL
1.0	12	SAND
12.0	17	CLAY
17.0	133	TILL
133.0	177	LIMESTONE

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	136.0	CASING	5.0			INSERT	PVC
136.0	177.0	OPEN HOLE	4.0				
10.0	80.0	CASING GROUT					CEMENT

Top of Casing: 2.0 ft above ground

PUMPING TEST

Date : 1998 Dec 03 Pumping 100.0 Imp. gallons/minute

Water level before test : 5.0 ft below ground

Water level at end of test : 2.0 ft below ground

Test duration:

Test Zone: from 136.0 ft to 177.0 ft