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



1 Miles

1:60000

0

Fields drawn by Tone Ag in consultation with

landowner, and subject to change. Orthophotos are 1:60,000 from Manitoba Land Initative website

Data Sources:



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



\_\_\_\_\_

0.1 Miles

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





1:5500

2019-09-04

### **Animal Units Calculator**

			Current	Operation	Proposed	Operation
А	В	с	D	E	F	G
Operation Type	Animal Categories	Animal Units per Head	Current Number of Animals <sup>1</sup>	Current Animal Units	Proposed Number of Animals <sup>2</sup>	Proposed Number of Animal Units
	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		-		-
Dairy <sup>3</sup>	Heifers (4 to 13 months)	0.41		-		-
-	Heifers (> 13 months)	0.87		-		-
	Bulls	1.35		-		-
	Veal calves	0.13		-		-
	Beef cows including associated livestock	1.25		-		-
Boof	Backgrounder	0.5		-		-
Beel	Summer pasture / replacement heifers	0.625		-		-
	Feeder cattle	0.769		-		-
	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weanling (up to 11 lbs)	0.25		-		-
Dime	Sows - farrow to nursery (51 lbs)	0.313		-		-
Pigs	Boars (artificial insemination units)	0.2		-		-
	Weanlings, Nursery (11-51 lbs)	0.033		-		-
	Growers / Finishers (51-249 lbs)	0.143		-		-
	Broilers	0.005		-		-
	Roasters	0.01		-		-
Chickons	Layers	0.0083		-		-
Chickens	Pullets	0.0033		-		-
	Broiler breeder pullets	0.0033		-		-
	Broiler breeder hens	0.01		-		-
	Broilers	0.01		-		-
Turkeys	Heavy Toms	0.02		-		-
	Heavy Hens	0.01		-		-
Horses	Mares	1.333		-		-
Sheen	Ewes	0.2		-		-
Cheep	Feeder lambs	0.063		-		-
Other Livestock	Туре:			-		-
Other Errestock	Туре:			-		-
			Total Current:	600	Total Proposed:	1.840

#### Footnotes:

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

<sup>2</sup> Enter the total number of animals associated with the operation post construction or expansion.

<sup>3</sup> 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)	Р	
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 est	imate per year:
Litres	50048800
Imperial gallons	11023965
Cubic decametres	50.05

\*Calculations are based on Manitoba AVERAGES for • Feed composition

	iningo	Tarkose						Cnickens	2						Animal Type				efter	Dire				Beef					Amongo a summer of	associated livestoria	Dates (million second and			Animal Type (A)		Animal Turn
Heavy hens "	Heavy tonis *	Brollers <sup>9</sup>	Puilets ~ solid back *	Pullets ~ HODC	L'Uners - Code .	Eavers - solid back -		anare food	1 SHORE _ AGAA \$	Roasters floor a	Broiler breeder oullets *	Broiler breeder hens <sup>7</sup>	Brollers floor <sup>a</sup>	rype of Operation			Grower / Finisher (51 - 249 lbs)	weanings, Nursery (11 - 51 lbs)	cows - iarrow to nursery (51 ibs)	Sql 11 0 dh) (neam (neam (statistics))	Source - Teston to Italian (234 - 234 lbs)		Conder celle	Suppor poster Leader	Contraction of the second seco	Reef over industry and washwater		nnea Hrusian	the states	Tin Stall			Fieo Stall		Animai Sub-type (B)	
2000	FPGs for Poultry	Table 3, pg 85,				1	2000	FPGs for Poultry	Table 3. pg 85.									2007	FPGs for Pigs	MAFR! website,			BRAL SDOL	pg 117, FPGs for			1		1995	FPGs for Dairy	Table 5 pg 59			(0)	Datasaa	
3	5	2		0	0			2						Default Manure Pr			Liquid	Liquid	Liquid	Liquid	Liquid	Solid	Solid	Solid	Solid	Liquid	Solid	Liquid <sup>s</sup>	Solid	Sem-Sold 5	Liquid <sup>5</sup>	Solid	Semi-Solid <sup>\$</sup>	Manure Type (D)		Daily A
32	58	83		.75	71		68	33	21	40	90	2.3	.23	oduction (1 <sup>3</sup> /year/bird vace)	Yearly Manure Produ	U.&V	30.0	0.1	-	0.8	23	11	0.85	0.73	1.2	0,5	3.0	3,6	3.5	3.6	3,5	3,4	3.5	(¶²/animal/day) (Ĕ)	Default Manure	<b>Aanure Production</b>
														Operation Manure Production ' (ft <sup>2</sup> /year/bird space)	tion														3.5					Production <sup>1</sup> (ft <sup>3</sup> /animal/day) (F)	Operation Manure	
														Production Period <sup>2</sup> (Days)															365					(9) (10)	Production Period	
														Number of Birds <sup>3</sup> (Capacity)															9/16					(Capacity)	Number of Animats	
		-												Total Manure Volume (n <sup>2</sup> ) (F/385xGxH)														1,022,000,00	4 000 000 V					(R <sup>2</sup> ) (FXGxH)	Total Manure Volum	
				9.9			UU	22						Liquid Manure (Imp Gal)	Total Manues Webser	0.0	0.0	0.0	0.0	0.0							0.0		0.0	0.0		6.0	~	Liquid Manure (Imp Gal)	P Total Manure Volume	

Sizing of a manure storage facility in accordance with all requirements of the Livestock Manure and Montalibles Management Regulation (M.R. 42/98) is the responsibility of the operator.

# Instructions and footnotes:

<sup>1</sup> ENTER the manure production estimate for your operation. If no estimate is available, use the default value provided in colum E. References for default daily and yearly manure production are provided in column C. <sup>2</sup> ENTER the number of days worth of manure that will be produced. For earthen manure storage facilities the minimum storage requirement is 400 days. For steel and concrete manure storage facilities the minimum storage requirement is 400 days. <sup>3</sup> ENTER the total number of animals or birds that the operation can hold (e.g. bern or feedlot capacity).

\* Milking cows includes all lactating and dry cows.

<sup>a</sup> Default manure production estimates for semi-solid and liquid dairy manure incluse manure and washwater from the milking partour.

<sup>4</sup> 2 inches of wood shavings or 4 inches of straw placed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/H<sup>3</sup>

One-third litter floor, two-thirds slatted floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/H

<sup>8</sup> Manure removed from bern at 90% moisture content with a density of 59 lb/ft<sup>3</sup>

<sup>9</sup> Poultry operations using litter (solid pack) must provide an estimate of yearly manure production

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	0	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	0	160		160	3M, 4M, 5W	39	Rural Agricultural Area	Agriculture
ESE 11-7-7E	Ste. Anne	9	11/2/2017	0	75		75	5W	32	Rural Agricultural Area	Agriculture
W 1/2 1-7-7E	Ste. Anne	10	11/2/2017	0	180	inundated area	161	5W, 3M	50	Rural Agricultural Area	Agriculture
PT S 6-7-8E	Ste. Anne	11	11/2/2017	0	150	inundated area, 6W	135	5W	49	Rural Agricultural Area	Agriculture
S 1/2 5-7-8E	Ste. Anne	12	11/2/2017	0	140	inundated area, 6W	91	2MP	17	Rural Agricultural Area	Agriculture
NW 5-7-8E	Ste. Anne	13A	11/2/2017	0	115	inundated area	112	2M, 5W	23	Rural Agricultural Area	Agriculture
NE 5-7-8E	Ste. Anne	13B/C	11/2/2017	0	170		165	5W	7	Rural Agricultural Area	Agriculture
4-7-8E	Ste. Anne	14	10/26/2018	0	302		302	3P, 5W	33	Rural Agricultural Area	Agriculture
PT E 1/2 4-7-8E	Ste. Anne	15	11/2/2017	0	130		128	5W, 2MP	37	Rural Agricultural Area	Agriculture
NW 3-7-7E	Ste. Anne	20	11/2/2017	0	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	0	127	planned EMS	125	3M-5W	6	Rural Agricultural Area	Agriculture
N 1/2 35-6-7E	La Broquerie	3	10/26/2018	0	290		290	3M, 2M, 5W	33	Agricultural Area 2	Rural Area 2
NW 36-6-7E	La Broquerie	5	11/2/2017	0	90	6W	60	5W, 3M, 4M	24	Agricultural Area 2	Rural Area 2
				TOTALS	2274		2130				

#### MANURE APPLICATION FIELD CHARACTERISTICS TABLE

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

Spreadable Acres in Ste Anne1780Spreadable Acres in La Broquerie350



12 Aviation Boulevard St. Andrews MB R1A 3N5 Canada T: 204-334-8846 F: 204-334-6965 dgh@dghengineering.com

#### Existing EMS (based on DGH Engineer records)

I wo identical cells bu	uilt 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

<b>Present Requireme</b>	nts 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.

E-\Sawka Consulting Ltd - 3438\002 Enterprise Louis Balceen Tech Review\Design & Working\work\2019-07-21 to Sawka Consulting docx

www.dghengineering.com

#### 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 chang 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 Provinical Technical Review Site Asses 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				
			Animal	N Excreted Per Herd Adjusted for Storage N	P2O5 Excreted per Herd Per
Туре	Storage Type	Volatilization	Numbers	Loss	Year
				(lb/yr/herd)	(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:					EL	.BI				
	Remo	val	Uptake					Ren	noval	Uptake
Сгор	P2O5	Ν	Ν	Units	Yield	Units	Acreage	P2O5	Ν	Ν
								(lb)	(lb)	(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	<b>2</b> 130	130618	443812	472874
			Estimate	ed Average R	emoval/Up	otake (lb/ac)	)	61.3	208.4	222.0
				Acres in Ha	nover and I	La Broquerie	<mark>e</mark> 350			
			Pro	portion in H	anover or l	La Broquerie	e 16%			
				5						
		5								
					Т	otal Acreage	<b>2</b> 130			
*Notes:	Enter the num	ber of acre	es that are	in the RM's c	f Hanover	or La Broque	erie in cell H2	6.		
Notes.	Additional acr	es include	acres for w	hich crop rer	noval or so	il data is lim	ited or unava	ailable.		

3 - Farm Excretion			
Operation Name:	ELBI		
Species	Animal Category/Operation type	Ν	P2O5
		(lb/year)	(lb/year)
	Boars	0	0
	Weanlings	0	0
Pigs	Growers/finishers	0	0
1 185	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
Beef	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Mature Cows, plus assoc livestock	239905	127307
	Ewes	0	0
	Replacement Ewes	0	0
Shoon	Rams	0	0
Sheep	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
	Broilers	0	0
Chickens	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
	Layer Pullets	0	0
Lavors	Layer Hens	0	0
Layers	Breeder Pullets	0	0
	Breeder Hens	0	0
	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
Turkeys	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 livestock in the proposed expansion.	s table, not	just the

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

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 16	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 16	
Ser 1	COUNTY NE 35-06-08E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 135	
Northwood: (701) 587-6010	PREV. CROP	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 100000 BUX # U
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terpi	retati	on	1s	t Cro	p Choic	e	2nd Crop Choice				3rd Crop Choice					
		VLow	Low	Med	High		Corn-Grain			Corn-	Silage			Soy	beans				
0-6"	4 lb/ac						YIEL	D GOAL		YIELD GOAL					YIEL	D GOAL			
6-24"	9 lb/ac	***					160	BU		20 Tons					50	BU			
0-24''	13 lb/ac					SUG	GESTE	O GUIDELIN	NES	SUGGESTED GUIDELINES			S	SUC	GESTE	O GUIDE	GUIDELINES		
Nitrate							Broa	adcast		Broadcast			Broadca						
						LB/A	CRE	APPLICA	TION	LB/ACRE		APPLICAT	APPLICATION		ACRE	APPLIC	CATION		
Olsen	30 ppm	*****	*****	*****	*****	N	179			N	195			Ν	***				
Phosphorus Potassium	83 ppm	*****	*****	k		P2O5	15	Band (2	x2) *	P2O5	15	Band (2x2	2) *	P2O5	0				
0-24''	420 lb/ac	*****	*****	*****	*****	K <sub>2</sub> O	126	Broadca	ast	K <sub>2</sub> O	144	Broadcas	st	K2O	82	Broad	lcast		
0-6" 6-24"	30 lb/ac 54 lb/ac	*****	******	******	*****	CI		Not Availat	: ple	CI		Not Availabl	e	CI	o				
Sulfur Boron	0.6 ppm	*****	**			S	15	Broado (Trial	ast )	S	15	Broadca (Trial)	st	S	15	Broa (Tr	dcast ial)		
Zinc	2.09 ppm	*****	*****	*****	*****	В	0			В	0			В	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 %	*****	***				Catio		on Excl	nange	% Bas	e Sa	turati	on (Ty	oical Rai	nge)			
Carbonate(CCE)	1.5 %	*****	**			Soil p	Soil pH Buffer pH		Capacity		% Ca % M		Mg % K		% Na % H				
0-6" 6-24"	0.3 mmho/cm 0.21 mmho/cm	*****	*			0-6" <b>8</b> 6-24" <b>8</b>	8.1 8.3			20.5 me	q	(65-75) <b>83.1</b>	(15 <b>1</b>	-20) <b>5.1</b>	(1-7) <b>1.0</b>	(0-5) <b>0.7</b>	(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: P205 = 64 K20 = 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: 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. 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.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 15	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 15	
Jers	COUNTY <b>E04-07-08E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 180	
Northwood: (701) 587-6010	PREV. CROP Alfalfa	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 1880001 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	$\int_{C}^{CAD} \# \mathbf{NW} 23357$

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1	lst C	rop Choic	e	2	nd C	rop Choi	ce	3rd Crop Choice																									
		VLow	Low	Med	High		Co	orn-Grain			Co	rn-Silage			Soy	beans																							
0-6" 6-24"	3 lb/ac 6 lb/ac						YI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL																							
0 24	0 15/ 40	**					1	60 BU			20	Tons			50	BU																							
0-24''	9 lb/ac					SU	GGEST	FED GUIDELI	ED GUIDELINES SUGGEST			GESTED GUIDELINES			SUGGESTED GUIDELIN																								
Nitrate							В	roadcast		Broadcast					Broadcast																								
						LB/A	LB/ACRE APPLICATI		TION	LB/ACRE		APPLICA	APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		APPLICATION		CRE	APPLI	CATION
Olsen Phosphorus	34 ppm	*****	*****	******	*****	N	133			N	149			N	***																								
Potassium	92 ppm	*****	*****	k * *		P <sub>2</sub> O <sub>5</sub>	15	Band (2x	2) *	P <sub>2</sub> O <sub>5</sub>	15	Band (2x	2) *	P <sub>2</sub> O <sub>5</sub>	0																								
0-24''	392 lb/ac	*****	*****	*****	*****	K <sub>2</sub> O	117	Broadca	ast	K20	136	Broadca	ast	K2O	76	Broa	lcast																						
Chloride						CI		Not Avail	able	CI		Not Avail	able	CI	0																								
0-6 6-24"	108 lb/ac	*****	******	* * * * * * * * * * * * * * * * * * *	******	S	0			S	0			S	0																								
Boron	1.1 ppm	*****	*****	****		В	0			В	0			В	0																								
Zinc	1.75 ppm	*****	*****	*****	****	Zn	5	Broadcast	(Trial)	Zn	5	Broadcast	(Trial)	Zn	0																								
Iron	72.8 ppm	*****	*****	******	*****																																		
Manganese	19.1 ppm	*****	*****	*****	*****	Fe	0			Fe	0			Fe	0																								
Copper	0.7 ppm	*****	*****	****		Mn	0			Mn	0			Mn	0																								
Magnesium	490 ppm	*****	*****	*****	*****	Cu	0			Cu	0			Cu	0																								
Calcium	5106 ppm	*****	*****	*****	*****	Mg	0			Mg	0			Mg	0																								
Sodium	45 ppm	*****	*			Lime				Lime				Lime																									
Org.Matter	5.3 %	*****	*****	*****	***	Soil pH		Buffer pH	Catio	n Exch	ange	% Bas	e Satu	ration	(Typi	cal Rar	ige)																						
Carbonate(CCE)	2.4 %	*****	*****	k		501	PI	builer pli	С	apacit	y	% Ca	% M	g %	K	% Na	% H																						
0-6" 6-24" Sol. Salts	0.41 mmho/cm 0.32 mmho/cm	*****	****			0-6" 6-24"	8.1 8.1		30	0.0 me	q	(65-75) <b>85.0</b>	(15-20 <b>13.6</b>	) (1- 0	7) .8	(0-5) <b>0.7</b>	(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 \* 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: P205 = 64 K20 = 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: P205 = 72 K20 = 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 A GVISE 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 TEST REPORT	
Found	FIELD ID Field 12	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 12	
Jers	COUNTY <b>S 05-07-08E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 160	
Northwood: (701) 587-6010	PREV. CROP Alfalfa	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	
La Broquerie, MB	KLEEFELD, MB ROA OVO	$\int_{-}^{-} LAB \# NW 23343$

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterpi	retati	on	1	lst C	rop Choic	e	2	nd Ci	rop Choi	ce	3rd Crop Choice					
		VLow	Low	Med	High		C	orn-Grain			Co	n-Silage			Soybeans				
0-6" 6-24"	3 lb/ac						ΥI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL			
0 24	015/40	**					1	60 BU 2			20	Tons	50 BU						
0-24''	9 lb/ac					SU	GGEST	ESTED GUIDELINES			SUGGESTED GUIDELINES				SUGGESTED GUIDELINES				
Nitrate							В	Broadcast			Broadcast				Broadcast				
						LB/A	LB/ACRE APPLICATION		TION	LB/ACRE		APPLICA	TION	I LB/AC		APPLI	CATION		
Olsen Phosphorus	24 ppm	*****	*****	*****	*****	N	133			N	149			N	***				
Potassium	116 ppm	*****	*****	****		P <sub>2</sub> O <sub>5</sub>	15	Band (2x	2) *	P <sub>2</sub> O <sub>5</sub>	30	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	0				
0-24''	456 lb/ac	*****	******	*****	*****	K <sub>2</sub> O	92	Broadca	ast	K <sub>2</sub> O	117	Broadca	ast	K20	62	Broa	dcast		
Chloride						CI		Not Avail	able	CI		Not Avail	able	CI	0				
0-6" 6-24"	48 lb/ac 66 lb/ac	*****	* ****** * *****	******	*****	S	0			S	0			S	0				
Sulfur Boron	16					В	0			В	0			В	0				
Zinc	1.37 ppm	*****	* ******	******	*****	Zn	4	Broadcast	(Trial)	Zn	4	Broadcast	(Trial)	Zn	0				
Iron	55.8 ppm	*****	*****	*****	*****						-								
Manganese	41.4 ppm	*****	*****	*****	*****	Fe	0			Fe	0			Fe	0				
Copper	1.12 ppm	*****	*****	*****		Mn	0			Mn	0			Mn	0				
Magnesium	843 ppm	*****	*****	*****	*****	Cu	0			Cu	0			Cu	0				
Calcium	4111 ppm	*****	*****	*****	*****	Mg	0			Mg	0			Mg	0				
Sodium	189 ppm	*****	*****	*****	*****	Lime				Lime				Lime					
Org.Matter	4.3 %	*****	*****	****					Catio	n Exch	ange	% Bas	e Satu	ation	(Typi	cal Rar	nge)		
Carbonate(CCE)	3.9 %	*****	*****	***		Soil pH		Buffer pH	С	Capacity		% Ca % M		g %	ĸ	% Na	% Н		
0-6" 6-24" Sol. Salts	0.58 mmho/cm 0.33 mmho/cm	*****	* ****** * **	**		0-6" 6-24"	8.5 8.6		28	8.7 me	q	(65-75) <b>71.6</b>	(15-20 <b>24.5</b>	) (1- <b>1</b>	7) .0	(0-5) <b>2.9</b>	(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 \* 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 A GVISE 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 TEST REPORT	N
Eour	FIELD ID Field 13A	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 13A	
Ser 1	COUNTY NW 05-07-08E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 130	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 1886663 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	$\int_{C} LAB \# NW 23352$

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterp	retati	on	1	lst C	rop Choic	e	2	nd C	rop Choi	ce	3rd Crop Choice				
		VLow	Low	Med	High		С	orn-Grain			Co	rn-Silage			Soy	beans		
0-6" 6-24"	10 lb/ac						ΥI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL		
0-24	0 10/ ac	***					1	.60 BU			20	Tons			50	BU		
0-24''	16 lb/ac					SU	GGES	TED GUIDELI	NES	SUGGESTED GUIDELINES				SUGO	ELINES			
Nitrate							Broadcast			Broadcast								
						LB/A	ACRE	APPLICA	TION	LB/ACRE		APPLICA	TION	LB/A	CRE	APPLI	CATION	
Olsen Phosphorus	23 ppm	*****	*****	*****	*****	N	176			N	192			N	***			
Potassium	172 ppm	*****	*****	*****	*****	P <sub>2</sub> O <sub>5</sub>	20	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	35	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	0			
0-24''	504 lb/ac	*****	******	*****	*****	K <sub>2</sub> O	35	Broadca	ast	K <sub>2</sub> O	72	Broadca	ast	K20	28	Broa	lcast	
Chloride						CI		Not Avail	able	CI		Not Avail	able	CI	0			
0-6" 6-24"	112 lb/ac 138 lb/ac	*****	* ****** * *****	* * * * * * * * * * * * * * * * * * *	******	S	0			S	0			S	0			
Boron	0.8 ppm					В	0			В	0			В	0			
Zinc	1.57 ppm	*****	******	* * * * * * * *	***	Zn	4	Broadcast	(Trial)	Zn	4	Broadcast	(Trial)	Zn	0			
Iron	46.8 ppm	*****	******	*****	*****										_			
Manganese	3.4 ppm	*****	*****	*****	***	Fe	0			Fe	0			Fe	0			
Copper	0.46 ppm	*****	*****			Mn	0			Mn	0			Mn	0	ļ		
Magnesium	415 ppm	*****	*****	*****	*****	Cu	0			Cu	0			Cu	0			
Calcium	4708 ppm	*****	*****	*****	*****	Mg	0			Mg	0			Mg	0			
Sodium	59 ppm	*****	****			Lime				Lime				Lime				
O rg.Matter	3.8 %	*****	*****	***		Soil all		Puffor rH	Catio	n Exch	ange	% Bas	e Satu	ration	(Турі	cal Rar	ige)	
Carbonate(CCE)	3.3 %	*****	*****	***		501	Soli pH Buffer pH C		Capacity		% Ca % M		g %	ĸ	% Na	% H		
0-6" 6-24" Sol. Salts	0.55 mmho/cm 0.3 mmho/cm	*****	* ****** * *	**		0-6" 6-24"	8.1 8.2		2	7.7 me	q	(65-75) <b>85.0</b>	(15-20 <b>12.5</b>	) (1-	7) . <b>6</b>	(0-5) <b>0.9</b>	(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: P205 = 64 K20 = 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: 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. 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 TEST REPORT	
	FIELD ID Field 13B	
2 m	SAMPLE ID	
C Jak	FIELD NAME Field 13B	
Ser 1	COUNTY <b>NE 05-07-08E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 80	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 1880004 BOX # U
La Broquerie, MB	KLEEFELD, MB ROA OVO	$\int LAD \# INV23355$

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1	lst C	rop Choic	e	2	nd C	rop Choi	ce	3rd Crop Choice				
		VLow	Low	Med	High		С	orn-Grain			Co	rn-Silage			Soy	beans		
0-6" 6-24"	27 lb/ac 36 lb/ac						YIELD GOAL				YIE	LD GOAL			YIEL	D GOAL		
0 24	50 15/ 40	*****	*****	ĸ			160 BU				20	Tons			50	BU		
0-24''	63 lb/ac					SU	GGES	SESTED GUIDELINES			SUGGESTED GUIDELINES				SUGGESTED GUIDELINES			
Nitrate							E	Broadcast	oadcast Bi			oadcast	Broadcast					
						LB/A	LB/ACRE APPLICATION		LB/ACRE		APPLICA	TION	LB/A	CRE	APPLI	CATION		
Olsen Phosphorus	16 ppm	*****	*****	******	*****	N	129			N	145			N	***			
Potassium	129 ppm	*****	*****	*****	*	P <sub>2</sub> O <sub>5</sub>	60	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	74	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	36	Broa	dcast	
0-24''	476 lb/ac	*****	*****	******	*****	K20	79	Broadca	ast	K20	107	Broadca	ast	K20	54	Broa	dcast	
Chloride						CI		Not Avail	able	CI		Not Avail	able	CI	0			
6-24"	116 ID/ac 192 lb/ac	*****	******	******* *****	******	S	0			S	0			S	0			
Boron	0.9 nnm	*****				В	0			В	0			В	0			
Zinc	1.82 ppm	*****	*****	******	*****	Zn	2	Broadcast	(Trial)	Zn	2	Broadcast	(Trial)	Zn	0			
Iron	44.3 ppm	*****	*****	*****	*****													
Manganese	3.3 ppm	*****	*****	*****	***	Fe	0			Fe	0			Fe	0			
Copper	0.59 ppm	*****	*****	***		Mn	0			Mn	0			Mn	0			
Magnesium	372 ppm	*****	*****	*****	****	Cu	0			Cu	0			Cu	0			
Calcium	5377 ppm	*****	*****	******	*****	Mg	0			Mg	0			Mg	0			
Sodium	59 ppm	*****	***			Lime				Lime				Lime				
Org.Matter	6.0 %	*****	*****	*****	*****	Soil nH		Buffer pH	Catio	n Exch	ange	% Bas	e Satu	ration	(Typi	cal Rar	ige)	
Carbonate(CCE)	2.5 %	*****	*****	k		3011	рп	builer ph	С	apacit	y	% Ca	% M	g %	K	% Na	% H	
0-6" 6-24" Sol. Salts	0.56 mmho/cm 0.31 mmho/cm	*****	******	**		0-6" 6-24"	8.0 8.2		30	0.6 me	q	(65-75) <b>87.9</b>	(15-20 <b>10.1</b>	) (1- <b>1</b>	7) <b>.1</b>	(0-5) <b>0.8</b>	(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: P205 = 64 K20 = 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: 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. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P205 = 44 K20 = 75 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

	SOIL TEST REPORT	
- Founda	FIELD ID Field 11	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 11	
Jers 1	COUNTY SW 06-07-08E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 150	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 1880005 BUX # U
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterpi	retati	on	1st Crop Choice		2nd Crop Choice				3rd Crop Choice					
		VLow	Low	Med	High		Cor	rn-Grain			Corn-	Silage			So	/beans	
0-6"	8 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIEL	D GOAL	
6-24"	12 lb/ac	****					160	0 BU			20	Tons			50	BU	
0-24''	20 lb/ac					SUGO	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELINE	S	SU	GGESTE	d guide	LINES
Nitrate							Bro	padcast			Broa	dcast			Bro	adcast	
						LB/A	CRE	APPLICA	TION	LB/A	ACRE	APPLICAT	ION	LB,	ACRE	APPLI	CATION
Olsen	47 ppm	*****	******	*****	*****	N	172			N	188			N	***		
Phosphorus Potassium	236 ppm	****	******	******	*****	P <sub>2</sub> O <sub>5</sub>	15	Band (2	x2) *	P <sub>2</sub> O <sub>5</sub>	15	Band (2x)	2) *	P2O5	0		
<b>0-24''</b> Chloride	548 lb/ac	****	*****	*****	*****	K <sub>2</sub> O	10	Band (2	x2) *	K <sub>2</sub> O	21	Broadca	st	K <sub>2</sub> O	0		
<b>0-6"</b> <b>6-24"</b> Sulfur	80 lb/ac 138 lb/ac	*****	* ****** * *****	* * * * * * * * * * * * * * * * * * *	******	CI		Not Availat	: ple	CI		Not Availabl	e	CI	0		
Boron	1.5 ppm	*****	******	*****	****	S	0			S	0			S	0		
Zinc	4.17 ppm	*****	******	*****	*****	В	0			В	0			В	0		
Iron	34.8 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0		
Manganese	4.3 ppm	*****	*****	*****	****	Fe	0			Fe	0			Fe	0		
Copper	0.89 ppm	*****	******	******		Mn	0			Mn	0			Mn	0		
Magnesium	475 ppm	*****	*****	*****	*****	Cu	0			Cu	0			Cu	0		
Calcium	4051 ppm	*****	*****	*****	*****	Mg	0			Mg	0			Mg	0		
Sodium	108 ppm	*****	*****	****		Lime				Lime				Lime			
O rg.Matter	4.2 %	*****	*****	*****		Sail		Duffer all	Cati	ion Excl	hange	% Bas	e Sa	turati	on (Ty	pical Ra	nge)
Carbonate(CCE)	2.3 %	*****	*****			Soll p	)/T	butter pH		Capaci	ty	% Ca	%	Mg	% K	% Na	% H
0-6" 6-24" Sol. Salts	0.53 mmho/cm 0.28 mmho/cm	*****	* ****** * *	**		0-6" <b>8</b> 6-24" <b>8</b>	8.4 8.6			25.3 me	≥q	(65-75) <b>80.1</b>	(15 <b>1</b>	-20) <b>5.7</b>	(1-7) <b>2.4</b>	(0-5) <b>1.9</b>	(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: P205 = 64 K20 = 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: 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. 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 TEST REPORT	) <u>N</u>
Eour	FIELD ID Field 10	
2014	SAMPLE ID	
- And	COUNTY <b>W 01-07-07E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 180	
Northwood: (701) 587-6010	PREV. CROP <b>Corn-Grain</b>	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 1886666 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW23341</b>

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterp	retati	ion	1s	st Cro	op Choic	e	2n	d Cro	p Choice		3	rd Cr	op Cho	ice
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			So	/beans	
0-6"	8 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIEL	D GOAL	
0-24	21 10/ 40	*****	k				160	) BU			20	Tons			50	BU	
0-24''	29 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELINE	S	SU	GGESTE	D GUIDE	LINES
Nitrate							Bro	oadcast			Broa	dcast			Bro	adcast	
						LB/A	CRE	APPLICA	TION	LB/A	ACRE	APPLICAT	ION	LB,	ACRE	APPLI	CATION
Olsen	43 ppm	*****	*****	* * * * * * *	*****	N	163			N	179			N	***		
Potassium	129 ppm	*****	******	* *****	* *	P <sub>2</sub> O <sub>5</sub>	15	Band (2	x2) *	P2O5	15	Band (2x2	2) *	P2O5	0		
<b>0-24''</b> Chloride	180 lb/ac	*****	*****	* * * * * * *	*****	K <sub>2</sub> O	79	Broadca	ast	K <sub>2</sub> O	107	Broadcas	st	K <sub>2</sub> O	54	Broa	dcast
0-6" 6-24"	72 lb/ac 360 +lb/ac	***** *****	* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	******	CI		Not Availat	: ple	CI		Not Availabl	e	CI	0		
Sulfur Boron	1 1 ppm					S	0			S	0			S	0		
Zinc	6.77 ppm	*****	* * * * * * *	* * * * * * * *	*****	В	0			В	0			В	0		
Iron	67.2 ppm	*****	*****	******	*****	Zn	0			Zn	0			Zn	0		
Manganese	8.4 ppm	*****	*****	* *****	*****	Fe	0			Fe	0			Fe	0		
Copper	2.98 ppm	*****	*****	* *****	***	Mn	0			Mn	0			Mn	0		
Magnesium	443 ppm	*****	*****	* *****	*****	Cu	0			Cu	0			Cu	0		
Calcium	3880 ppm	*****	*****	* *****	*****	Mg	0			Mg	0			Mg	0		
Sodium	47 ppm	*****	k *			Lime				Lime				Lime			
Org.Matter	6.0 %	*****	*****	* *****	*****				Cat	ion Excl	hange	% Bas	e Sa	turati	on (Ty	oical Ra	nge)
Carbonate(CCE)	1.6 %	*****	* * *			Solip		Butter pH		Capacit	ty	% Ca	%	Mg	% K	% Na	% H
0-6" 6-24"	0.33 mmho/cm 0.6 mmho/cm	*****	* ** * *****	***		0-6" <b>7</b> 6-24" <b>8</b>	7.8 3.0			23.6 me	≥q	(65-75) <b>82.1</b>	(15 <b>1</b> !	-20) <b>5.6</b>	(1-7) <b>1.4</b>	(0-5) <b>0.9</b>	(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: P205 = 64 K20 = 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: 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. 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 TEST REPORT	
- Eouro	FIELD ID Field 3	
2 A IN	SAMPLE ID	
C Jak	FIELD NAME Field 3	
Jersi	COUNTY N 35-06-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV
(http://www.agvise.com)	SECTION QTR ACRES 290	
Northwood: (701) 587-6010	PREV. CROP Corn-Grain	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 1886667 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW23346</b>

Date Received 04/26/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1s	1st Crop Choice		2n	d Cro	p Choice		3	rd Cr	op Cho	ice	
		VLow	Low	Med	High		Cor	rn-Grain			Corn-	Silage			So	/beans	
0-6"	4 lb/ac						YIEI	_D GOAL			YIELD	GOAL			YIEL	D GOAL	
0-24	45 ID/ ac	*****	****				16	0 BU			20	Tons			50	BU	
0-24''	49 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELINE	S	SU	GGESTE	D GUIDE	LINES
Nitrate							Bro	oadcast			Broa	dcast			Bro	adcast	
						LB/A	CRE	APPLICA	TION	LB/A	ACRE	APPLICAT	ION	LB,	/ACRE	APPLI	CATION
Olsen	37 ppm	*****	*****	*****	*****	N	143			N	159			N	***		
Potassium	114 ppm	*****	*****	*****		P2O5	15	Band (2	x2) *	P2O5	15	Band (2x2	2) *	P2O5	0		
<b>0-24''</b> Chloride	444 lb/ac	*****	*****	******	*****	K <sub>2</sub> O	94	Broadca	ast	K <sub>2</sub> O	119	Broadcas	st	K <sub>2</sub> O	63	Broad	dcast
0-6" 6-24"	60 lb/ac 132 lb/ac	***** *****	******	* ****** * ******	******	CI		Not Availat	: ple	CI		Not Availabl	e	CI	o		
Sulfur Boron	0.0					S	0			S	0			S	0		
Zinc	4.55 ppm	*****	******	k *		В	0			В	0			В	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 %	*****	*****	***					Cat	ion Excl	hange	% Bas	e Sa	turati	on (Ty	pical Ra	nge)
Carbonate(CCE)	3.1 %	*****	*****	k *		Soil	H	Buffer pH		Capacit	ty	% Ca	%	Mg	% К	% Na	% H
0-6" 6-24" Sol. Salts	0.4 mmho/cm 0.24 mmho/cm	****** *****	****			0-6" <b>8</b> 6-24" <b>8</b>	3.3 3.2			26.1 me	≥q	(65-75) <b>80.9</b>	(15 <b>1</b>	-20) <b>7.1</b>	(1-7) <b>1.1</b>	(0-5) <b>0.9</b>	(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: P205 = 64 K20 = 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: 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. 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 TEST REPORT	
Eauna	FIELD ID Field 1	
2 m	SAMPLE ID	
C Jak	FIELD NAME Field 1	
	COUNTY <b>E 03-07-07E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 240	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109	<u></u>	
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 1896276 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW26854</b>

Date Sampled 05/01/2017

Date Received 05/03/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterpi	retati	on	1st Crop Choice		e	2	nd C	rop Choi	ce	3rd Crop Choice				
		VLow	Low	Med	High		C	orn-Grain			Co	rn-Silage			Soy	vbeans	
0-6" 6-24"	4 lb/ac						YI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL	
0-24	12 10/ 80	***					1	.60 BU			20	Tons			50	BU	
0-24''	16 lb/ac					SU	GGES	TED GUIDELI	NES	SU	GGEST	ED GUIDELI	NES	SUG	GESTE	d GUIDI	ELINES
Nitrate							E	Broadcast			Br	oadcast			Bro	adcast	
						LB/A	ACRE	APPLICA	TION	LB/A	ACRE	APPLICA	TION	LB/A	ACRE	APPLI	CATION
Phosphorus	12 ppm	*****	*****	*****		N	176			N	192			N	***		
Potassium	79 ppm	*****	*****	k		P <sub>2</sub> O <sub>5</sub>	83	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	97	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	52	Broa	dcast
0-24''	620 lb/ac	*****	*****	*****	*****	K <sub>2</sub> O	130	Broadca	ast	K <sub>2</sub> O	147	Broadca	ast	K <sub>2</sub> O	84	Broa	dcast
Chloride 0-6"	116 lb/ac	*****	*****	*****	*****	CI		Not Avail	able	CI		Not Avail	able	CI	0		
<b>6-24''</b> Sulfur	360 +lb/ac	*****	*****	*****	*****	S	0			S	0			S	0		
Boron	0.9 ppm	*****	*****	k <b>*</b>		В	0			В	0			В	0		
Zinc	1.22 ppm	*****	*****	*****	*	Zn	4	Broadcast	(Trial)	Zn	4	Broadcast	(Trial)	Zn	0		
Iron	51.7 ppm	*****	*****	*****	*****	Fe	0			Fe	0			Fe	0		
Manganese	5.1 ppm	*****	*****	*****	*****	Mn	0			Mn	0			Mn	0		
Copper	1.34 ppm	*****	*****	*****	*	Cu	0			C	0			C	0		
Calcium	624 ppm	*****	*****	******	*****	Cu	0			Cu	0			Cu	0		
Sodium	5075 ppm	*****	*****	******	*****	ing	U			Mg	0			Mg	U		
Org.Matter	48 ppm	*****	**			Lime				Lime				Lime			
Carbonate(CCE)	3.7 %	*****	******	****		Soil	рН	Buffer pH	Catio	n Exch	nange v	% Bas		ration	(Typi	cal Rar	ige)
0-6" 6-24"	0.53 mmho/cm 0.56 mmho/cm	*****	*******	**		0-6" 6-24"	8.1 8.3		3:	1.0 me	q	(65-75) <b>81.9</b>	(15-20 <b>16.8</b>	) (1- ; 0	-7) .7	(0-5) <b>0.7</b>	(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: P205 = 64 K20 = 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: 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. 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 TEST REPORT	N
	FIELD ID West of Field 1	
2 and in	SAMPLE ID	
C Jak	FIELD NAME West of Field 1	
Sur	COUNTY	
Soil Analysis by Agyise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 240	
Northwood: (701) 587-6010	PREV. CROP Soybeans	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 1896277 BOX # 0
La Broquerie, MB	KLEEFELD, MB R0A 0V0	LAB # <b>NW26870</b>

Date Sampled 05/01/2017

Date Received 05/03/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1st Crop Choice		2	nd C	rop Choi	ce	3rd Crop Choice					
		VLow	Low	Med	High		C	orn-Grain			Co	rn-Silage			Soy	beans	
0-6" 6-24"	18 lb/ac 27 lb/ac						ΥI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL	
	27 15/ 40	*****	***				1	60 BU			20	Tons			50	BU	
0-24''	45 lb/ac					SU	GGEST	FED GUIDELI	NES	SU	GGEST	ED GUIDELI	NES	SUGO	GESTEI	O GUIDI	ELINES
Nitrate							В	roadcast			Br	oadcast			Bro	adcast	
						LB/A	CRE	APPLICA	TION	LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLI	CATION
Olsen Phosphorus	12 ppm	*****	*****	*****	K	N	117			N	133			N	***		
Potassium	72 ppm	*****	*****			P <sub>2</sub> O <sub>5</sub>	83	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	97	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	52	Broad	dcast
0-24''	84 lb/ac	*****	*****	*****	*****	K <sub>2</sub> O	137	Broadca	ast	K20	152	Broadca	ast	K20	88	Broad	dcast
Chloride	24 lb/ac					CI		Not Avail	able	CI		Not Avail	able	CI	0		
6-24"	66 lb/ac	*****	******	* * * * * * * * * * * * * * * * * * *	« <b>*</b> « <b>* * * * * *</b> *	S	0			S	0			S	0		
Boron	0.5 ppm	*****	***			В	0			В	0			В	0		
Zinc	1.04 ppm	*****	*****	*****	k	Zn	2	Broadcast	(Trial)	Zn	2	Broadcast	(Trial)	Zn	o		
Iron	33.2 ppm	*****	*****	*****	*****												
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	nН	Buffer n4	Catio	n Exch	ange	% Bas	e Satu	ration	(Typi	cal Ran	ige)
Carbonate(CCE)	1.0 %	*****	k			301	ы	builer ph	С	apacit	y	% Ca	% M	g %	K	% Na	% H
0-6" 6-24" Sol. Salts	0.25 mmho/cm 0.17 mmho/cm	*****	k			0-6" 6-24"	7.6 7.9		10	6.7 me	q	(65-75) <b>81.8</b>	(15-20 <b>16.8</b>	) (1- <b>1</b>	7) <b>.1</b>	(0-5) <b>0.3</b>	(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 A GVISE 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 TEST REPORT	
Four	FIELD ID Field 7	
ZOaks	FIELD NAME Field 7	
See 1	COUNTY <b>E 02-07-07E</b>	
Soil Analysis by Agyise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 160	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 1982123 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW63484</b>

Date Sampled 09/05/2017

Date Received 09/11/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	nterpretation		1st Crop Choice				2nd Crop Choice				3rd Crop Choice					
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			Gra	ss/Pasture	2	
0-6"	21 lb/ac						YIEL	D GOAL			YIELD	GOAL			YI	LD GOAL		
0-24	15 10/ ac	*****	*				17	5 BU			20	Tons			5	Tons		
0-24''	36 lb/ac					SUG	GESTE		NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUIDE	LINES	
Nitrate							Bro	oadcast			Broa	dcast			В	oadcast		
						LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	B/ACRE	APPL	CATION	
Olsen Phosphorus	39 ppm	*****	*****	*****	*****	N	174			N	172			N	114			
Potassium	149 ppm	*****	*****	*****	****	D.O.	15	Band (2	x2) *	D.O.	45	Band (2)	(2) *	<b>D</b> -O				
						P205	15			P205	15			P20.	5 0			
Chloride						K2O	64	Broadca	ast	K <sub>2</sub> O	91	Broadca	st	K2C	28	Broa	dcast	
0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****	******	* ******	******	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	4.12 ppm	*****	*****	* * * * * * *	*****	Zn	0	_		Zn	0			Zn	0			
Iron						5.				5.	-							
Manganese						ге				ге				ге				
Copper	2.2 ppm	*****	*****	* *****	**	Mn				Mn				Mn				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lim	e			
Org.Matter	4.5 %	*****	*****	* * * * * * *	ĸ				Cati	ion Evol	ange	% Ba	se Sa	turat	ion (T	pical Ra	nae)	
Carbonate(CCE)						Soil p	H	Buffer pH	Cat	Capacit	ty	% Ca	%	1g	% K	% Na	% H	
0-6" 6-24" Sol. Salts	0.76 mmho/cm 0.45 mmho/cm	***** *****	******	*****	ĸ	0-6" <b>8</b> 6-24" <b>8</b>	3.1 3.3							-				

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 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 4	
5 mil	SAMPLE ID	
C Jak	FIELD NAME Field 4	
Ser 1	COUNTY SW 36-06-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 110	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 2152881 BUX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terpi	retati	ion	1st Crop Choice				2nd Crop Choice				3rd Crop Choice			
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans	
0-6"	35 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIE	LD GOAL	
0-24	00 ID/ ac	*****	*****	*****	***		165	5 BU			20	Tons			5	0 BU	
0-24''	101 lb/ac					SUGO	GESTE		NES	SUG	GESTED	GUIDELIN	ES	SU	GGEST	ED GUIDE	LINES
Nitrate							Bro	adcast			Broa	dcast			В	oadcast	
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	ACRE	APPLI	CATION
<b>Olsen</b> Phosphorus	49 ppm	*****	*****	*****	*****	N	97			N	107			N	***	:	
Potassium	145 ppm	*****	*****	*****	****	DeOr	15	Band (2	x2) *	DeOr	15	Band (2x	(2) *	D=O			
						P205	15			P205	15			P20:			
Chloride						K <sub>2</sub> O	65	Broadca	ast	K <sub>2</sub> O	94	Broadca	st	K2O	45	Broa	dcast
0-6" 6-24"	50 lb/ac 48 lb/ac	*****	*****	*****	******	CI				CI				CI			
Sulfur						S	0			S	0			S	0		
Boron						В				В				В			
Zinc	5.75 ppm	*****	*****	*****	******	Zn	0	-		Zn	0			Zn	0		
Iron						5.	-			5.	-				-	_	
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	e		
O rg.Matter	2.7 %	*****	****					-	Cat	ion Evel		% Ra	se 52	turat	ion (T	nical Pa	nge)
Carbonate(CCE)						Soil p	DH I	Buffer pH	Cat	Capacit	ange ty	% Ca	% N	lg	% K	% Na	% H
0-6" 6-24" Sol. Salts	0.26 mmho/cm 0.19 mmho/cm	***** ****	c			0-6" <b>8</b> 6-24" <b>8</b>	8.1 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: P2O5 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	
Four	FIELD ID Field 3	
2 Oak	FIELD NAME Field 3	
	COUNTY N 35-06-07E	W E
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 290	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109	,	
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	S
	31119 RD 27E	(
	BOX 131	REF # 2152882 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW192995</b>

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terpi	retati	ion	15	1st Crop Choice			2nd Crop Choice				3rd Crop Choice			
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	bybeans	
0-6" 6-24"	26 lb/ac 42 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIE	LD GOAL	
0 24	42 10/ 40	*****	*****	*			165	BU			20	Tons			5	0 BU	
0-24''	68 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUIDE	LINES
Nitrate							Bro	adcast			Broa	dcast			В	oadcast	
						LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	B/ACRE	APPLI	CATION
<b>Olsen</b> Phosphorus	30 ppm	*****	*****	*****	*****	N	130			N	140			N	***		
Potassium	80 ppm	*****	*****			PaOr	15	Band (2	x2) *	PaOr	15	Band (2)	(2) *	P <sub>2</sub> O			
						1205	15			F 205	15			F 20			
Chloride						K20	133	Broadca	ast	K <sub>2</sub> O	146	Broadca	nst	K2C	84	Broa	dcast
0-6" 6-24"	34 lb/ac 60 lb/ac	*****	******	******	*	CI				CI				CI			
Sulfur						S	0			S	0			S	0		
Boron						B				B				B			
Zinc	4.01 ppm	*****	*****	*****	*****	70	0			70	0			70	0	_	
Iron						211				211	•			211	-		
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				Lim	e		
Org.Matter	4.0 %	*****	*****	****					Cat	ion Evel		% Ba	se Sa	turat	ion (T	nical Ra	nge)
Carbonate(CCE)						Soil p	oH E	Buffer pH	Cat	Capaci	ty	% Ca	%	1g	% K	% Na	% H
0-6" 6-24" Sol. Salts	0.25 mmho/cm 0.19 mmho/cm	***** ****	c			0-6" <b>8</b> 6-24" <b>8</b>	3.0 3.3							-			

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 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 1	
5 mil	SAMPLE ID	
C Jak	FIELD NAME Field 1	
Ser 1	COUNTY <b>E 03-07-07E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 240	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 2152883 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW192987</b>

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1st Crop Choice				2nd Crop Choice				3rd Crop Choice			
		VLow	Low	Med	High		Cori	n-Grain			Corn-	Silage			S	oybeans	
0-6"	39 lb/ac						YIEL	D GOAL			YIELD	GOAL			YII	LD GOAL	
0-24	57 10/ac	*****	*****	*****	k *		165	BU			20	Tons			5	0 BU	
0-24''	96 lb/ac					SUG	GESTEI	O GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUIDE	LINES
Nitrate							Bro	adcast			Broa	dcast			В	oadcast	
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	B/ACRE	APPLI	CATION
Olsen Phosphorus	40 ppm	*****	*****	*****	*****	N	102			N	112			N	**:	:	
Potassium	100 ppm	*****	*****	***		P2O5	15	Band (2	x2) *	P2O5	15	Band (2)	(2) *	P20	5 0		
										. 205				. 20		_	
Chloride						K <sub>2</sub> O	112	Broadca	ast	K <sub>2</sub> O	130	Broadca	nst	K2C	72	Broa	dcast
0-6" 6-24"	98 lb/ac 210 lb/ac	*****	*****	* * * * * * * * * * * * * * * * * * *	* ******	CI				CI				CI			
Sulfur						S	0			S	0			S	0		
Boron						В				В				В			
Zinc	4.32 ppm	*****	*****	******	*****	7n	0			7n	0			70	0		
Iron						211	Ŭ			211	•			211	0		
Manganese						Fe				Fe				Fe			
Copper	2.39 ppm	*****	*****	*****	***	Mn				Mn				Mn			
Magnesium						Cu	0			Cu	o			Cu	0		
Calcium						Mg				Mg				Mg			
Sodium						Lime				Lime				Lim	e		
Org.Matter	3.5 %	****	*****	***				1	Cat	ion Evel		% Ra	se Sa	turat	ion (T	nical Pa	nge)
Carbonate(CCE)						Soil p	DH E	Buffer pH	Cat	Capacit	ty	% Ca	% N	lg	% K	% Na	% H
0-6" 6-24" Sol. Salts	0.36 mmho/cm 0.26 mmho/cm	***** *****	**			0-6" <b>7</b> 6-24" <b>8</b>	7.9 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: \* 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.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 9	
2 mil	SAMPLE ID	
C Jak	FIELD NAME Field 9	
Ser 1	COUNTY SE 11-07-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 70	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 2152884 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterp	retati	ion	1st Crop Choice				2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	bybeans		
0-6"	29 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIE	LD GOAL		
0-24	55 ID/ ac	*****	*****	ĸ			165	5 BU			20	Tons			5	0 BU		
0-24''	62 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	SU	GGEST	ED GUIDE	LINES	
Nitrate							Bro	adcast			Broa	dcast			В	oadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LB	ACRE	APPLI	CATION	
Olsen Phosphorus	32 ppm	*****	*****	*****	* * * * * *	N	136			N	146			N	***	:		
Potassium	70 ppm	*****	****			D.O.	4.5	Band (2	x2) *	D.O.	45	Band (2)	(2) *	D.O.				
						P205	15			P205	15			P205	, ,			
Chloride						K <sub>2</sub> O	144	Broadca	ast	K <sub>2</sub> O	154	Broadca	ist	K2O	90	Broa	dcast	
0-6" 6-24"	48 lb/ac 96 lb/ac	*****	******	* * * * * * * *	* *****	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	3.96 ppm	*****	*****	*****	* *****	Zn	0			Zn	0			Zn	0			
Iron							-											
Manganese						ге				ге				ге				
Copper	1.47 ppm	*****	*****	* *****	* *	Mn				Mn				Mn				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lime	9			
Org.Matter	4.4 %	*****	*****	*****	*				Cati	ion Evol	ange	% Ba	se Sa	turat	ion (T	pical Ra	nae)	
Carbonate(CCE)						Soil p	DH E	Buffer pH	Cat	Capaci	ty	% Ca	%	1g	% K	% Na	% H	
0-6" 6-24" Sol. Salts	0.26 mmho/cm 0.2 mmho/cm	***** ****	ĸ			0-6" <b>7</b> 6-24" <b>8</b>	7.8 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 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	N
Soil Analysis by Agvise Laboratories (http://www.agvise.com) Northwood: (701) 587-6010 Benson: (320) 843-4109	FIELD IDField 10SAMPLE IDFIELD NAME Field 10COUNTYW 01-07-07ETWPRANGESECTIONQTRACRES180PREV. CROP Corn-Silage	W
SUBMITTED FOR: ELBI	SUBMITTED BY: DU4426 FOUR OAK AG SOLUTION 31119 RD 27E	S
La Broquerie, MB	BOX 131 KLEEFELD, MB ROA OVO	REF # 2152885 BOX # 0 LAB # NW192984

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	Interpretation				1st Crop Choice				2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans		
0-6" 6-24"	45 lb/ac						YIEL	D GOAL			YIELD	GOAL			YII	LD GOAL		
0-24	50 15/ ac	*****	*****	*****	*****		165	5 BU			20	Tons			5	0 BU		
0-24''	135 lb/ac					SUG	GESTE		NES	SUG	GESTED	GUIDELIN	ES	SU	GGEST	ED GUIDE	LINES	
Nitrate							Bro	adcast			Broa	dcast			В	oadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LB	B/ACRE	APPLI	CATION	
Olsen Phosphorus	50 ppm	*****	*****	*****	*****	N	63			N	73			N	**:	:		
Potassium	105 ppm	*****	*****	****		P2O5	15	Band (2	x2) *	P2O5	15	Band (2>	(2) *	P <sub>2</sub> O	5 0			
																_		
Chloride						K <sub>2</sub> O	107	Broadca	ast	K20	126	Broadca	ist	K20	69	Broa	dcast	
0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****	******	* ****** * *****	*****	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	6.28 ppm	*****	*****	*****	*****	Zn	0			7n	0			7n	0			
Iron						211	Ŭ			211				211	Ū			
Manganese						Fe				Fe				Fe				
Copper	2.86 ppm	*****	*****	*****	***	Mn				Mn				Mn				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lime	e			
Org.Matter	5.1 %	*****	*****	* * * * * * *	**			1	Cat	ion Evel		% Ra	se Sa	turat	ion (T	nical Ra	nge)	
Carbonate(CCE)						Soil p	DH I	Buffer pH	Cati	Capaci	ty	% Ca	%	lg	% K	% Na	% H	
0-6" 6-24"	0.67 mmho/cm 0.8 mmho/cm	***** *****	******	* * * * *	c	0-6" <b>7</b> 6-24" <b>7</b>	7.8 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: P2O5 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 5	
2 mil	SAMPLE ID	
C Jak	FIELD NAME Field 5	
Ser 1	COUNTY NW 36-06-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 110	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1st Crop Choice				2nd Crop Choice				3rd Crop Choice			
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	bybeans	
0-6"	35 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIE	LD GOAL	
0-24	40 ID/ aC	*****	*****	*****			165	5 BU			20	Tons			5	0 BU	
0-24''	83 lb/ac					SUG	GESTE		NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUIDE	LINES
Nitrate							Bro	oadcast			Broa	dcast			В	oadcast	
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	FION	LE	B/ACRE	APPLI	CATION
<b>Olsen</b> Phosphorus	24 ppm	*****	*****	*****	*****	N	115			N	125			N	***	:	
Potassium	140 ppm	*****	*****	*****	***	DeOr	15	Band (2	x2) *	DeOr	20	Broader	t	<b>D</b> =0			
						P205	15			P205	30	broauca	ISL	P20.	5 0		
Chloride						K <sub>2</sub> O	70	Broadca	ast	K <sub>2</sub> O	98	Broadca	st	K2C	48	Broa	dcast
0-6" 6-24"	118 lb/ac 294 lb/ac	*****	******	* * * * * * * * * * * * * * * * * * *	*****	CI				CI				CI			
Sulfur						S	0			S	0			S	0		
Boron						В				В				В			
Zinc	4.56 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0		
Iron											-						
Manganese						Fe		_		Fe				⊦e			
Copper	1.61 ppm	*****	*****	******	*	Mn				Mn				Mn			
Magnesium						Cu	0			Cu	0			Cu	0		
Calcium						Mg				Mg				Mg			
Sodium						Lime				Lime				Lim	e		
Org.Matter	6.1 %	*****	*****	******	*****				Cat	ion Evel		% Ba	se Sa	turat	ion (T	nical Ra	nge)
Carbonate(CCE)						Soil p	DH I	Buffer pH	Cati	Capaci	ty	% Ca	% N	1g	% K	% Na	% H
0-6" 6-24" Sol. Salts	0.65 mmho/cm 0.61 mmho/cm	***** *****	* * * * * * * * * * * * * * * * * * * *	****		0-6" <b>8</b> 6-24" <b>8</b>	8.1 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: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 6	
2 august	SAMPLE ID	
( Jak	FIELD NAME Field 6	
Sec.	COUNTY NE 36-06-07E	
Soil Analysis by Aqvise Laboratories	TWP RANGE	VV
(http://www.agvise.com)	SECTION QTR ACRES 100	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 2152887 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW192986</b>

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1st Crop Choice				2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans		
0-6"	47 lb/ac					YIELD GOAL			YIELD GOAL					YIE	LD GOAL			
0-24	42 ID/ aC	*****	*****	*****	k		16	5 BU			20	Tons			5	0 BU		
0-24''	89 lb/ac					SUG	GESTE	D GUIDELIN	IES	SUG	GESTED	GUIDELIN	ES	SU	IGGEST	ED GUIDE	LINES	
Nitrate							Bro	oadcast			Broa	dcast			В	roadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	B/ACRE	APPLI	CATION	
Olsen Phosphorus	30 ppm	*****	*****	*****	*****	N	109			N	119			N	***	¢		
Potassium	95 ppm	*****	*****	* * *		PaOr.	15	Band (2	(2) *	PaOr.	15	Band (2)	(2) *	P-O				
						F205	15			F205	15			F 20:				
Chloride						K <sub>2</sub> O	117	Broadca	ast	K <sub>2</sub> O	134	Broadca	ist	K2O	75	Broa	dcast	
0-6" 6-24"	76 lb/ac 114 lb/ac	*****	******	* * * * * * * *	******	CI				CI				CI				
Sulfur	.,					S	0			S	0			S	0			
Boron						В				В				В				
Zinc	3.39 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0	_		
Iron							-				-				-			
Manganese						Fe				Fe				Fe	_			
Copper	0.75 ppm	*****	*****	*****		Mn				Mn				Mn				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lime	e			
Org.Matter	4.2 %	*****	*****	*****					Cat	ion Evel		% Ra	se Sa	turat	ion (T	vnical Ra	nge)	
Carbonate(CCE)						Soil p	H	Buffer pH	Cati	Capaci	ty	% Ca	%	lg	% K	% Na	% H	
0-6" 6-24"	0.53 mmho/cm 0.27 mmho/cm	******	*****	**		0-6" <b>7</b> 6-24" <b>8</b>	7.7 8.0			-								

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: \* 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.

$\sim$	SOIL TEST REPORT	N .
Four	FIELD ID Field 11	
Oak	FIELD NAME Field 11	
	COUNTY <b>SW 06-07-08E</b>	
Soil Analysis by Agyise Laboratories	TWP RANGE	
(http://www.aqvise.com)	SECTION QTR ACRES 150	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109	,	
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	S
	31119 RD 27E	(
	BOX 131	REF # 2152888 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW192977</b>

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	Interpretation				1st Crop Choice				2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans	beans	
0-6" 6-24"	36 lb/ac 54 lb/ac						YIEL	D GOAL		YIELD GOAL					YII	LD GOAL		
0 24	54 15/ ac	*****	*****	*****	c		165	5 BU			20	Tons			5	0 BU	BU	
0-24''	90 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUIDE	LINES	
Nitrate							Bro	adcast			Broa	dcast			В	roadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	ΓΙΟΝ	LE	B/ACRE	APPLI	CATION	
<b>Olsen</b> Phosphorus	49 ppm	*****	*****	*****	*****	N	108			N	118			N	**:	¢		
Potassium	196 ppm	*****	*****	*****	*****	P2O5	15	Band (2	x2) *	P2O5	15	Band (2)	(2) *	P <sub>2</sub> O	< 0			
						- 205				1203				120		_		
Chloride						K <sub>2</sub> O	11	Broadca	ast	K <sub>2</sub> O	53	Broadca	st	K2C	0			
0-6" 6-24"	96 lb/ac 240 lb/ac	*****	******	******	******	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	4.40 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0			
Iron						211	Ŭ			211	•			211	Ŭ			
Manganese						Fe				Fe				Fe				
Copper	0.94 ppm	*****	*****	*****	c	Mn				Mn				Mn				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lim	e			
O rg.Matter	4.3 %	*****	*****	*****			!		Cati	in Frai		% Ba	50 S 3	turat	ion (T	vnical Pa	nge)	
Carbonate(CCE)						Soil p	oH E	Buffer pH	Cat	Capacit	ty	% Ca	% N	1g	% K	% Na	% H	
0-6" 6-24" Sol. Salts	0.4 mmho/cm 0.36 mmho/cm	***** *****	****			0-6" <b>8</b> 6-24" <b>8</b>	3.2 3.4							_				

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: P2O5 = 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: P2O5 = 72 K2O = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

	SOIL TEST REPORT	
	FIELD ID Field 13A	
5 min	SAMPLE ID	
C Jak	FIELD NAME Field 13A	
Ser 1	COUNTY NW 05-07-08E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 130	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 2132009 BUX # U
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retat	ion	1st Crop Choice				2	nd C	rop Cho	ice	3rd Crop Choice					
		VLow	Low	Med	High		С	orn-Grain			Co	rn-Silage			Soy	beans			
0-6"	21 lb/ac						YI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL			
0-24	21 10/ 40	*****	***				1	.65 BU			20	Tons			50	BU			
0-24''	42 lb/ac					SU	GGES <sup>-</sup>	TED GUIDELI	NES	SU	GGEST	ED GUIDEL	INES	SUGO	GESTEI	O GUID	ELINES		
Nitrate							E	Broadcast			Br	oadcast			Bro	adcast			
						LB/A	ACRE	APPLICA	TION	LB/A	ACRE	APPLIC	ATION	LB/A	CRE	APPLI	CATION		
Olsen Phosphorus	23 ppm	*****	*****	*****	* *****	N	156			N	166			N	***				
Potassium	129 ppm	*****	*****	* *****	* *	P <sub>2</sub> O <sub>5</sub>	20	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	35	Broade	ast	P <sub>2</sub> O <sub>5</sub>	0				
						K <sub>2</sub> O	82	Broadca	ast	K20	107	Broade	ast	K <sub>2</sub> O	54	Broa	dcast		
Chloride						CI				CI				CI					
0-6" 6-24"	42 lb/ac 72 lb/ac	****** *****	* ******	* ****** * *****	* ***** * *****	S	0			S	0			S	0				
Sulfur						В	-			в				В					
Boron							-	Broadcast	(Trial)			Broadcas	t(Trial)						
Linc	1.54 ppm	*****	*****	* *****	* ***	Zn	2		()	Zn	2			Zn	0				
Manganese						Fe				Fe				Fe					
Copper	0.51.000					Mn				Mn				Mn					
Magnesium	0.51 ppm	*****	*****	ĸ		Cu	0			Cu	0			Cu	0				
Calcium						Mg				Mg				Mg					
Sodium						Lime				Lime				Lime					
Org.Matter	3.8 %	*****	*****	****								0( Do	ee Cetu		(				
Carbonate(CCE)						Soil	pН	Buffer pH	Catio	n Exch apacit	ange v	% Ba	% Ma	ation	K 9	h Na	w H		
0-6" 6-24"	0.31 mmho/cm 0.2 mmho/cm	***** ****	k *			0-6" 6-24"	8.0 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.

$\sim$	SOIL TEST REPORT	
Soil Analysis by Agvise Laboratories	FIELD ID Field 13B   SAMPLE ID   FIELD NAME Field 13B   COUNTY NE 05-07-08E   TWP RANGE   SECTION QTR ACRES 80	WE
Northwood: (701) 587-6010 Benson: (320) 843-4109	PREV. CROP Corn-Grain	
SUBMITTED FOR: ELBI	SUBMITTED BY: DU4426 FOUR OAK AG SOLUTION	S
La Broquerie, MB	BOX 131 KLEEFELD, MB ROA OVO	REF #   2152890   BOX #   0     LAB #   NW192974

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient II	n The Soil	In	terp	retati	ion	1st Crop Choice				2	nd C	rop Cho	ice	3rd Crop Choice					
		VLow	Low	Med	High		С	orn-Grain			Coi	rn-Silage			Soy	beans			
0-6"	27 lb/ac						YI	ELD GOAL		YIELD GOAL					YIEL	D GOAL			
0-24	55 ID/ ac	*****	*****	k			1	.65 BU			20	Tons			50	BU			
0-24''	60 lb/ac					SU	GGES	TED GUIDELI	NES	SU	GGESTI	ED GUIDEL	INES	SUGO	GESTEI	D GUIDI	ELINES		
Nitrate							E	Broadcast			Br	oadcast			Bro	adcast			
						LB/A	ACRE	APPLICA	TION	LB/A	ACRE	APPLIC	ATION	LB/A	CRE	APPLI	CATION		
<b>Olsen</b> Phosphorus	7 ppm	*****	*****	k		N	138			N	148			N	***				
Potassium	48 ppm	*****	*			P <sub>2</sub> O <sub>5</sub>	115	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	125	Broado	ast	P <sub>2</sub> O <sub>5</sub>	72	Broa	dcast		
						K <sub>2</sub> O	167	Broadca	ast	K <sub>2</sub> O	172	Broado	ast	K20	103	Broa	dcast		
Chloride						CI				CI				CI					
0-6" 6-24"	100 lb/ac 186 lb/ac	****** *****	* ****** * ******	* * * * * * * * * * * * * * * * * * *	* ****** * *****	S	0			S	0			S	0				
Sulfur						В				В				В					
Zinc								Broadcast	(Trial)			Broadcas	t(Trial)						
Iron	1.09 ppm	*****	*****	*****	k	Zn	2			Zn	2		. ,	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 %	*****	*****	*****	****		-	1	Catio	n Evch	ange	% Ba	se Satu	ation	(Typi	cal Rar	nae)		
Carbonate(CCE)						Soil	рН	Buffer pH	Catlo	apacit	y	% Ca	% Mg	%	K 9	o Na	% H		
0-6" 6-24"	0.43 mmho/cm 0.26 mmho/cm	****** *****	****			0-6" 6-24"	8.0 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: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	N
Soil Analysis by Agvise Laboratories (http://www.agvise.com) Northwood: (701) 587-6010 Benson: (320) 843-4109	FIELD IDField 15SAMPLE IDFIELD NAME Field 15COUNTYE04-07-08ETWPRANGESECTIONQTRACRES180PREV. CROP Corn-Silage	W E
SUBMITTED FOR: ELBI	SUBMITTED BY: DU4426 FOUR OAK AG SOLUTION	S
La Broquerie, MB	BOX 131 KLEEFELD, MB ROA OVO	REF #   2152891   BOX #   0     LAB #   NW192989

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	Interpretation				1st Crop Choice				2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans		
0-6" 6-24"	29 lb/ac						YIEL	D GOAL			YIELD	GOAL			YIE	LD GOAL		
0-24	00 15/ 40	*****	*****	*****	ĸ		165	5 BU			20	Tons			5	0 BU	BU	
0-24''	89 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	SU	GGEST	ED GUIDE	LINES	
Nitrate							Bro	adcast			Broa	dcast			В	oadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LB	/ACRE	APPLI	CATION	
Olsen Phosphorus	37 ppm	*****	*****	*****	*****	N	109			N	119			N	***	:		
Potassium	97 ppm	*****	*****	* * *		PaOs	15	Band (2	x2) *	PaOs	15	Band (2)	(2) *	PaOr	0			
						1203	15			1203				1203	, U	_		
Chloride						K20	115	Broadca	ast	K <sub>2</sub> O	132	Broadca	nst	K20	73	Broa	dcast	
0-6" 6-24"	90 lb/ac 90 lb/ac	*****	*****	* * * * * * * * * * * * * * * * * * *	* ****** * *****	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	2.20 ppm	*****	*****	*****	*****	70	0			7n	0			70	0			
Iron						211	Ŭ			211				211	- U			
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	9			
Org.Matter	4.8 %	*****	*****	*****	* *				Cat	ion Evel		% Ra	se Sa	turat	ion (T	nical Ra	nge)	
Carbonate(CCE)						Soil p	oH E	Buffer pH	Cat	Capacit	ty	% Ca	%	1g	% K	% Na	% H	
0-6" 6-24" Sol. Salts	0.45 mmho/cm 0.27 mmho/cm	***** *****	*****			0-6" <b>7</b> 6-24" <b>8</b>	7.9 3.1							-				

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: \* 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.

	SOIL TEST REPORT	
	FIELD ID Field 12	
2 m	SAMPLE ID	
C Jak	FIELD NAME Field 12	
Jersi	COUNTY <b>S 05-07-08E</b>	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 160	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 2152892 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retat	ion	1st Crop Choice			2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		C	orn-Grain			Co	rn-Silage			Soy	beans	
0-6" 6-24"	41 lb/ac						YI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL	-
0-24	43 lb/ ac	*****	*****	*****			1	65 BU			20	Tons			50	BU	
0-24''	86 lb/ac					SU	GGES	FED GUIDELI	NES	SU	GGEST	ED GUIDEL	INES	SUGO	GESTE	D GUID	ELINES
Nitrate							B	Froadcast			Br	oadcast			Broa	adcast	
						LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLIC	ATION	LB/A	CRE	APPLI	CATION
Olsen Phosphorus	17 ppm	*****	*****	*****	* * * * * *	N	112			N	122			N	***		
Potassium	84 ppm	*****	*****	k		P <sub>2</sub> O <sub>5</sub>	56	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	69	Broade	ast	P <sub>2</sub> O <sub>5</sub>	32	Broa	dcast
						K <sub>2</sub> O	129	Broadca	ast	K <sub>2</sub> O	143	Broade	ast	K <sub>2</sub> O	81	Broa	dcast
Chloride						CI				CI				CI			
0-6" 6-24"	62 lb/ac 90 lb/ac	****** *****	* * * * * * * * * * * * * * * * * * *	* ****** * *****	* ***** * *****	S	0			S	0			S	0		
Sulfur						В				В				В			
Zinc	1.61 ppm	*****	*****	*****	****	Zn	4	Broadcast	(Trial)	Zn	4	Broadcas	t(Trial)	Zn	0		
Iron																	
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 %	*****	*****	*****	*			•	Catio	n Exch	ange	% Ba	se Satu	ation	(Typi	cal Rar	nge)
Carbonate(CCE)						Soil	рН	Buffer pH	С	apacit	у	% Ca	% Mg	%	K 9/	o Na	% Н
0-6" 6-24" Sol. Salts	0.44 mmho/cm 0.31 mmho/cm	*****	****			0-6" 6-24"	8.1 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: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

$\sim$	SOIL TEST REPORT	N
Soil Analysis by Agvise Laboratories (http://www.agvise.com) Northwood: (701) 587-6010	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 0	W E
Benson: (320) 843-4109	×	
SUBMITTED FOR:	SUBMITTED BY: DU4426 FOUR OAK AG SOLUTION	S
La Broquerie, MB	BOX 131 KLEEFELD, MB ROA OVO	REF # 2152893 BOX # 0 LAB # NW192978

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	15	st Cro	op Choic	e	2nd Crop Choice			e	3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans		
0-6" 6-24"	30 lb/ac 24 lb/ac						YIEL	D GOAL			YIELD	GOAL			YI	ELD GOAL		
	,	*****	*****				16	5 BU			20	Tons			5	0 BU		
0-24''	54 lb/ac					SUG	GESTE	D GUIDELI	NES	SUG	GESTED	GUIDELIN	ES	SL	IGGEST	ED GUID	ELINES	
Nitrate							Bro	oadcast			Broa	dcast			В	roadcast		
						LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	3/ACRE	APPL	ICATION	
Phosphorus	10 ppm	*****	*****	****		N	144			N	154			N	**:	ĸ		
Potassium	94 ppm	*****	*****	**		P <sub>2</sub> O <sub>5</sub>	97	Broadc	ast	P <sub>2</sub> O <sub>5</sub>	108	Broadca	st	P <sub>2</sub> O	5 60	Broa	dcast	
Chlorida						K <sub>2</sub> O	119	Broadc	ast	K <sub>2</sub> O	135	Broadca	ast	K2C	75	Broa	dcast	
0-6"	34 lb/ac	*****	*****	*****	k *	CI				CI				CI				
6-24" Sulfur	96 lb/ac	*****	*****	*****	*****	S	0			S	0			S	0			
Boron						В				В				В				
Zinc	0.87 ppm	*****	*****	****		Zn	5	Broadc	ast	Zn	5	Broadca	st	Zn	2	Broa	dcast	
Iron						Fe				Fe				Fe				
Manganese						Mp				Mp				Mp				
Copper	0.51 ppm	*****	*****			14111				1411				1411				
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lim	e			
Org.Matter	3.7 %	*****	*****	***				1	Cat	ion Excl	2000	% Ba	se Sa	turat	ion (T	vpical Ra	ange)	
Carbonate(CCE)						Soil p	H	Buffer pH	Cat	Capaci	ty	% Ca	%	Иg	% K	% Na	% H	
0-6" 6-24"	0.43 mmho/cm 0.21 mmho/cm	***** ****	****			0-6" <b>7</b> 6-24" <b>8</b>	7.9 3.1											

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: P205 = 72 K20 = 166 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

	SOIL TEST REPORT	
	FIELD ID Field 21	
5 m	SAMPLE ID	
C Jak	FIELD NAME Field 21	
Jers 1	COUNTY NW 11-07-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES <b>0</b>	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	KEF # 2152894 BOX # 0
La Broquerie, MB	KLEEFELD, MB ROA OVO	

Date Received 11/07/2017

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	15	st Cro	op Choic	e	2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High		Cor	n-Grain			Corn-	Silage			S	oybeans		
0-6" 6-24"	17 lb/ac 15 lb/ac						YIEL	D GOAL			YIELD	GOAL			YII	LD GOAL		
0-24	15 15/ 80	*****	c				165	5 BU			20	Tons			5	0 BU		
0-24''	32 lb/ac					SUG	GESTE	D GUIDELI	NES	SUG	GESTED	GUIDELIN	ES	SU	IGGEST	ED GUIDE	LINES	
Nitrate							Bro	adcast			Broa	dcast			В	roadcast		
	<b>6</b>					LB/A	ACRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LB	B/ACRE	APPLI	CATION	
Phosphorus	6 ррт	*****	****			N	166			N	176			N	**:	¢		
Potassium	41 ppm	*****				P <sub>2</sub> O <sub>5</sub>	121	Broadc	ast	P <sub>2</sub> O <sub>5</sub>	130	Broadca	st	P <sub>2</sub> O <sub>2</sub>	5 76	Broa	dcast	
Chloride						K <sub>2</sub> O	175	Broadc	ast	K <sub>2</sub> O	177	Broadca	ist	K2O	10	/ Broa	dcast	
0-6"	40 lb/ac	*****	*****	*****	****	CI				CI				CI				
<b>6-24"</b> Sulfur	66 lb/ac	*****	*****	*****	*****	S	0			S	0			S	0			
Boron						В				В				В				
Zinc	0.49 ppm	*****	****			Zn	10	Broadc	ast	Zn	10	Broadca	ast	Zn	6	Broa	dcast	
Iron						Fe		_		Fe				Fe				
Manganese						Mp				Mp				Mn				
Copper	0.44 ppm	*****	****					_							_			
Magnesium						Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lime	e			
Org.Matter	3.6 %	*****	*****	***				-1	Cati	ion Excl	hande	% Ba	se Sa	turat	ion (T	vpical Ra	nae)	
Carbonate(CCE)						Soil p	pH I	Buffer pH	Cati	Capacit	ty	% Ca	%	٩g	% K	% Na	% H	
0-6" 6-24"	0.29 mmho/cm 0.18 mmho/cm	***** ****	*			0-6" <b>8</b> 6-24" <b>8</b>	3.2 3.4											

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.

	SOIL TEST REPORT	
Four	FIELD ID Field 1 SAMPLE ID FIELD NAMEField 1	
Ser	COUNTY <b>E 03-07-07E</b>	W E
Soil Analysis by Agvise Laboratories	TWP RANGE	vv
(http://www.agvise.com)	SECTION QTR ACRES 240	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 2357483 BOX # 2787
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW64996</b>

Date Sampled 09/06/2018

Date Received **09/10/2018** 

Date Reported 11/19/2018

Nutrient I	n The Soil	In	terp	retati	ion	1	Lst C	rop Choic	e	2	rop Cho	ice	3rd Crop Choice					
		VLow	Low	Med	High		С	orn-Grain			Co	rn-Silage			Soy	beans		
0-6" 6-24"	18 lb/ac						YI	ELD GOAL			YIE	LD GOAL			YIEL	D GOAL		
0-24	50 107 ac	*****	*****				1	L70 BU			20	Tons			50	BU		
0-24''	54 lb/ac					SU	GGES	TED GUIDELI	NES	SU	GGEST	ED GUIDEL	INES	SUGO	GESTEI	D GUIDI	ELINES	
Nitrate							E	Broadcast			Br	oadcast			Bro	adcast		
						LB/A	ACRE	APPLICA	TION	LB/A	ACRE	APPLIC	ATION	LB/A	CRE	APPLI	CATION	
<b>Olsen</b> Phosphorus	18 ppm	*****	*****	*****	*****	N	150			N	154			N	***			
Potassium	111 ppm	*****	*****	****		P <sub>2</sub> O <sub>5</sub>	51	Broadca	ast	P <sub>2</sub> O <sub>5</sub>	63	Broad	ast	P <sub>2</sub> O <sub>5</sub>	28	Broa	dcast	
						K <sub>2</sub> O	104	Broadca	ast	K <sub>2</sub> O	121	Broad	ast	K <sub>2</sub> O	65	Broa	dcast	
Chloride						CI				CI				CI				
0-6" 6-24"	120 +lb/ac 360 +lb/ac	***** *****	* ****** * *****	*****	* ****** * *****	S	0			S	0			S	0			
Sulfur						В				В				В				
Boron								Broadcast	(Trial)			Broadcas	t(Trial)					
Iron	1.90 ppm	*****	*****	*****	*****	Zn	4			Zn	4			Zn	0			
Manganese						Fe				Fe				Fe				
Copper	1.66 ppm					Mn				Mn				Mn				
Magnesium	1.00 ppm	****	******	******		Cu	0			Cu	0			Cu	0			
Calcium						Mg				Mg				Mg				
Sodium						Lime				Lime				Lime				
O rg.Matter	3.1 %	*****	*****	c					C-N-			0/2 B 2	co Satu	ation		cal Par		
Carbonate(CCE)						Soil	рН	Buffer pH	Catio	n Exch apacit	ange y	% Ca	% Ma	%	< 9	o Na	w н	
0-6" 6-24"	0.42 mmho/cm 0.35 mmho/cm	*****	****			0-6" 6-24"	8.1 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.

$\sim$	SOIL TEST REPORT	
	FIELD ID Field 3	
2 m	SAMPLE ID	
	FIELD NAME Field 3	
Gersi	COUNTY N 35-06-07E	
Soil Analysis by Agvise Laboratories	TWP RANGE	VV E
(http://www.agvise.com)	SECTION QTR ACRES 290	
Northwood: (701) 587-6010	PREV. CROP Corn-Silage	
Benson: (320) 843-4109		
SUBMITTED FOR:	SUBMITTED BY: DU4426	
ELBI	FOUR OAK AG SOLUTION	5
	31119 RD 27E	
	BOX 131	REF # 2499269 BOX # 3812
La Broquerie, MB	KLEEFELD, MB ROA OVO	LAB # <b>NW164922</b>

Date Sampled **10/26/2018** 

Date Received 10/30/2018

Date Reported 11/19/2018

Nutrient I	n The Soil	In	iterpi	retati	ion	1s	st Cro	op Choice	e	2nd Crop Choice				3rd Crop Choice				
		VLow	Low	Med	High			Rye			Corn-	Silage			S	oybeans		
0-6" 6-24"	15 lb/ac 36 lb/ac						YIEL	_D GOAL			YIELD	GOAL			YI	ELD GOAL		
0-24	50 15/ 80	*****	****				60	) BU			18	Tons			ļ	50 BU		
0-24''	51 lb/ac					SUG	GESTE	D GUIDELIN	NES	SUG	GESTED	GUIDELIN	ES	รเ	JGGEST	ED GUID	ELINES	
Nitrate							Bro	oadcast			Broa	dcast			В	roadcast		
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICA	TION	LE	3/ACRE	APPL	ICATION	
Olsen Phosphorus	33 ppm	*****	*****	*****	*****	N	93			N	136			N	**	*		
Potassium	94 ppm	*****	******	***		P2O5	15	Band (Starte)	d r)*	P2O5	15	Band (2>	(2) *	P20	5 0			
Chloride						K <sub>2</sub> O	83	Broadca	ast	K20	121	Broadca	ist	K2C	) 75	Broa	dcast	
0-6" 6-24"	32 lb/ac 66 lb/ac	*****	*****	******	*	CI				CI				CI				
Sulfur						S	0			S	0			S	0			
Boron						В				В				В				
Zinc	4.44 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0			
Iron						Fe				Fe				Fe				
Manganese						Mn				Mn				Mn				
Magnosium	2.08 ppm	*****	*****	*****	***	CII	0	-		CII	0				0			
Calcium						Ma	-			Ma	-			Ma				
Sodium						ing				Mg				I*ig				
O rg.Matter	2.0.0/					Lime				Lime				Lim	e			
Carbonate(CCE)	2.9 %	*****	*****	•		Soil p	н	Buffer pH	Cati	ion Excl	hange	% Ba	se Sa	turat	ion (T	ypical Ra	inge)	
0-6" 6-24"	0.24 mmho/cm 0.21 mmho/cm	***** *****	k			0-6" <b>8</b> 6-24" <b>8</b>	8.1 8.3			Capacit	cy in the second s	% Ca	%	Чg	% K	% Na	% H	

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.

$\sim$	SOIL TEST REPORT	N N
Four	FIELD ID Field 14 SAMPLE ID FIELD NAME Field 14 COUNTY 04-07-08E	
Soil Analysis by Agvise Laboratories (http://www.agvise.com) Northwood: (701) 587-6010 Benson: (320) 843-4109	TWPRANGESECTIONQTRACRESPREV. CROP Grass/Alfalfa	280 W
SUBMITTED FOR:	SUBMITTED BY: DU442	5 S
Broquerie, MB	BOX 131 KLEEFELD, MB ROA OVO	REF #   2499270   BOX #   3860     LAB #   NW164934

Nutrient Ir	n The Soil	In	terpi	etati	on	1s	t Cro	p Choic	е	2n	d Cro	p Choic	e	3	rd Cr	op Cho	ice
		VLow	Low	Med	High		R	lye			Corn-	Silage			So	ybeans	
0-6" 6-24"	21 lb/ac 15 lb/ac						YIELD	GOAL			YIELD	GOAL			YIE	D GOAL	
0 24	10 10/ 40	*****	*				60	BU			20	Tons			50	BU	
0-24''	36 lb/ac					SUGO	GESTED	GUIDELI	NES	SUG	GESTED	GUIDELIN	ES	SUG	GGESTE	D GUIDE	LINES
Nitrate							Broa	adcast			Broa	dcast			Bro	adcast	
						LB/A	CRE	APPLICA	TION	LB/A	CRE	APPLICAT	TION	LB/	ACRE	APPLI	CATION
Olsen Phosphorus	33 ppm	*****	*****	*****	*****	N	108			N	172			N	***		
Potassium	85 ppm	*****	*****	*		P <sub>2</sub> O <sub>5</sub>	15	Ban (Starte	d r)*	P2O5	15	Band (2>	(2) *	P2O5	0		
Chloride						K <sub>2</sub> O	91	Broadc	ast	K <sub>2</sub> O	142	Broadca	ist	K <sub>2</sub> O	81	Broa	dcast
0-6" 6-24"	68 lb/ac 60 lb/ac	*****	******	*****	*****	CI				CI				CI			
Sulfur						S	0			S	0			S	0		
Boron						В				В				В			
Zinc	2.39 ppm	*****	*****	*****	*****	Zn	0			Zn	0			Zn	0		
Mangaporo						Fe				Fe				Fe			
Conner	0.50					Mn				Mn				Mn			
Magnesium	0.56 ppm	*****	*****	*		Cu	0			Cu	0			Cu	0		
Calcium						Ma				Ma				Ma			
Sodium						Limo				Limo				Limo			
O rg.Matter	3.8.%	ale ale ale ale ale al		ate ate ate		Line				Linte				Line			
Carbonate(CCE)	5.6 %	*****	*****	***		Soil p	в В	uffer pH	Cati	on Excl	nange	% Ba	se Sa	turatio	on (Ty	pical Ra	nge)
0-6" 6-24" Sol. Salts	0.34 mmho/cm 0.16 mmho/cm	***** ****	**			0-6" <b>8</b> 6-24" <b>8</b>	3.0 3.2			Сарасн	LY	% Ca	% I	ng (	% K	% Na	% H

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.

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



1 Miles

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



Twp 6

1:60000

0



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



1 Miles

1:60000

0

Transportation 1:60,000 map 1994 Sections are from Manitoba Land Initative website

landowner, and subject to change. Orthophotos are 1:60,000 from Manitoba Land Initative website

Highways are from Manitoba Highways and

TONE AG CONSULTING

2019-09-03

From: "Murray, Colin (SD)" <<u>Colin.Murray@gov.mb.ca</u>> Date: August 9, 2019 at 3:04:30 PM CDT To: "<u>ibsawka@shaw.ca</u>'" <<u>ibsawka@shaw.ca</u>>

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: <u>http://www.natureserve.org/conservation-tools/conservation-status-assessment</u>. 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: <u>https://www.gov.mb.ca/sd/pubs/conservation-data-centre/mbcdc\_bird\_setbacks.pdf.</u> 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	UTMY:5489944.2 XY Accurac	y:No Accuracy	I		
Owner:	ENTERPRISES LOUIS BALCAEN	I 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 D	OLOMITE

#### **REMARKS**:

ESTIMATED PUMPING RATE W/ AIR

WELL	LOG	(In	perial	units	
From	To(f	(t.)	Log		
0.0	1		TOPSOIL		
1.0	12	12 S		SAND	
12.0	17	17		CLAY	
17.0	133	33 TILL			
133.0	) 177	177 LIMESTONE			

WELL CONSTRUCTION

Inside Outside SlotFrom To(ft) Const.Method Dia.(in) Dia.(in) Size(in) TypeMaterial0.0136.0CASING5.0INSERTPVC136.0177.0OPEN HOLE4.0INSERTPVC10.080.0CASING GROUTCEMENTTop of Casing:2.0ft 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