

R.M. OF KILLARNEY- TURTLE MOUNTAIN



0 5
SCALE IN KILOMETRES

PROVINCE OF MANITOBA
INFRASTRUCTURE
HIGHWAY PLANNING AND DESIGN BRANCH
GEOGRAPHIC & RECORDS MANAGEMENT SECTION
WINNIPEG
JANUARY 1, 2015

LEGEND

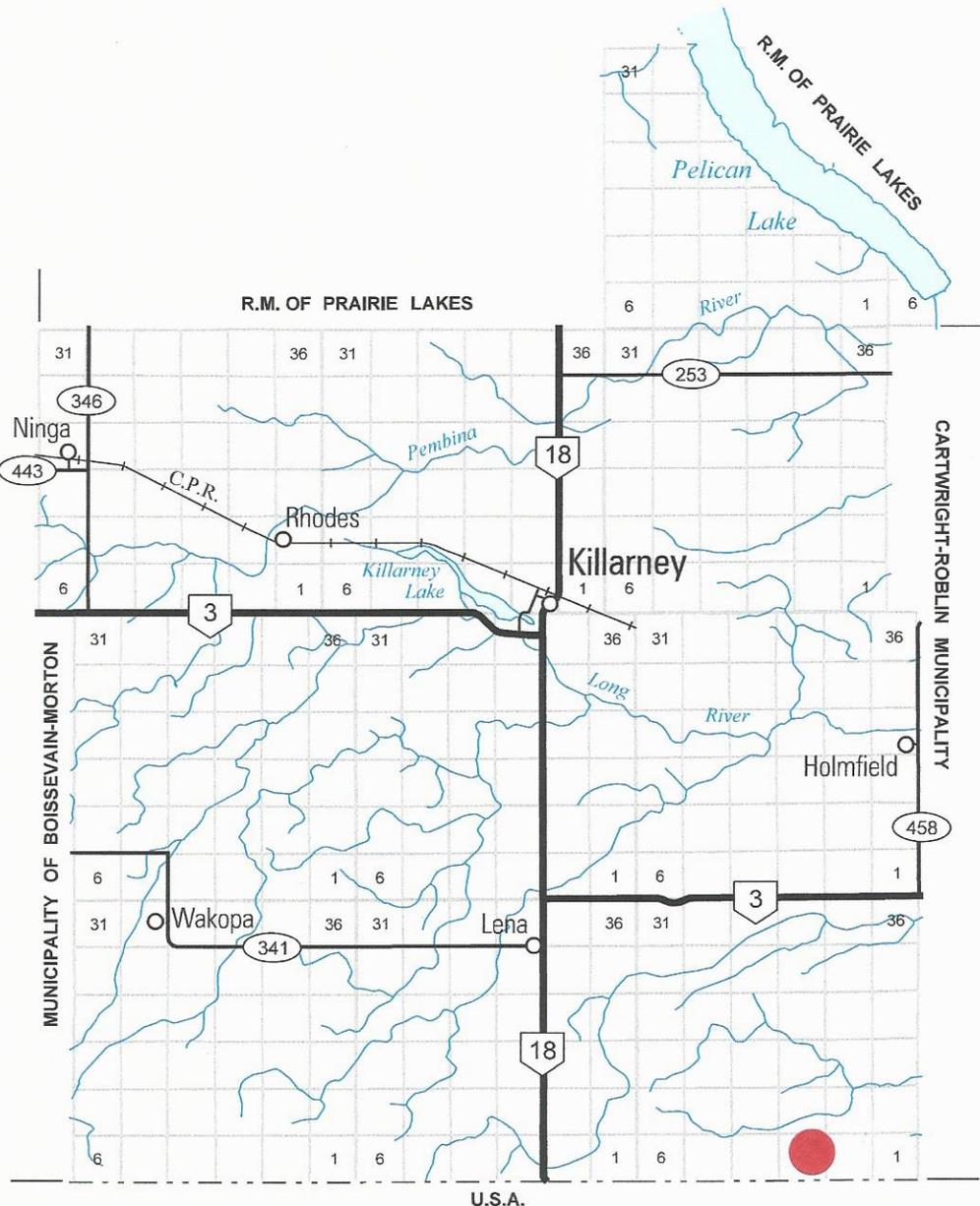
PROVINCIAL TRUNK HIGHWAYS		ACCESS ROADS	
PROVINCIAL ROADS		RAILWAYS	
		SOUTHGATE SITE	

Tp. 4

Tp. 3

Tp. 2

Tp. 1



U.S.A.

Rge. 18W.

Rge. 17W.

Rge. 16W.

SHEET 1 OF 1

R.M. OF KILLARNEY-TURTLE MOUNTAIN



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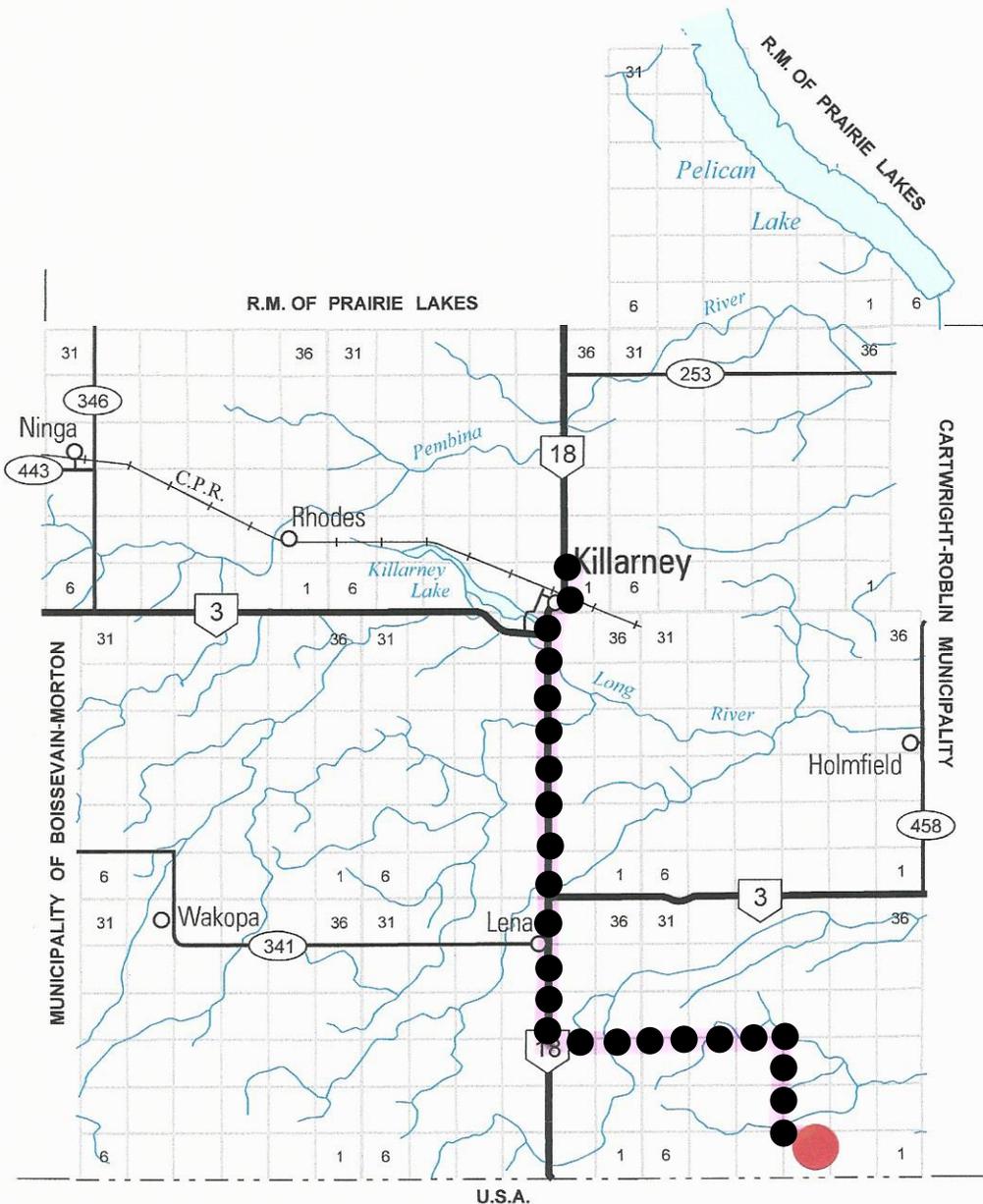
- PROVINCIAL TRUNK HIGHWAYS 
- PROVINCIAL ROADS 
- TRUCK ACCESS ROADS 
- RAILWAYS 

Tp. 4

Tp. 3

Tp. 2

Tp. 1



Rge. 18W.

Rge. 17W.

Rge. 16W.

SHEET 1 OF 1

Southgate [NE-03-01-16W] - Spread Acres



Prepared by:
Matt Reimer
 Manager of Agronomic Services
 Hylife Ltd.

Animal Units Calculator

A	B	C	Current Operation		Proposed Operation	
			D	E	F	G
Operation Type	Animal Categories	Animal Units per Head	Current Number of Animals ¹	Current Animal Units	Proposed Number of Animals ²	Proposed Number of Animal Units
Dairy ³	Mature cows (lactating and dry) including associated livestock	2		-		-
	Mature cows (lactating and dry)	1.35		-		-
	Heifers (0 to 3 months)	0.16		-		-
	Heifers (4 to 13 months)	0.41		-		-
	Heifers (> 13 months)	0.87		-		-
	Bulls	1.35		-		-
	Veal calves	0.13		-		-
Beef	Beef cows including associated livestock	1.25		-		-
	Backgrounder	0.5		-		-
	Summer pasture / replacement heifers	0.625		-		-
	Feeder cattle	0.769		-		-
Pigs	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weanling (up to 11 lbs)	0.25		-		-
	Sows - farrow to nursery (51 lbs)	0.313		-		-
	Boars (artificial insemination units)	0.2		-		-
	Weanlings, Nursery (11-51 lbs)	0.033		-		-
	Growers / Finishers (51-249 lbs)	0.143	10,400	1,487	20,000	2,860
Chickens	Broilers	0.005		-		-
	Roasters	0.01		-		-
	Layers	0.0083		-		-
	Pullets	0.0033		-		-
	Broiler breeder pullets	0.0033		-		-
	Broiler breeder hens	0.01		-		-
Turkeys	Broilers	0.01		-		-
	Heavy Toms	0.02		-		-
	Heavy Hens	0.01		-		-
Horses	Mares	1.333		-		-
Sheep	Ewes	0.2		-		-
	Feeder lambs	0.063		-		-
Other Livestock	Type:			-		-
	Type:			-		-
Total Current:				1,487	Total Proposed:	2,860

Footnotes:

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

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

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

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



Water Requirement Calculation Table

Livestock	Number	IG/day per animal in winter	IG/day per animal in summer	IG/day (Imperial gallons per day)
Beef/Dairy/Bison *				
Feeder/heifer/steer (600 lb.)		5	9	-
Feeder (900 lb.)		7	12	-
Feeder (1250 lb.)		10	15	-
Cow/calf pair		12	15	-
Dry milking cow **		10	12	-
Lactating cow **		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)			6.5	-
Dry Sow/Boar			4	-
Feeder	20,000		3	60,000
Nursery (33 lb.)			2	-
Chickens				
Broilers			0.035	-
Roasters/Pullets			0.04	-
Layers			0.055	-
Breeders			0.07	-
Turkeys				
Turkey Growers			0.13	-
Turkey Heavies			0.16	-
Sheep/Goats				
Sheep/Goats			2	-
Ewes/Does			3	-
Lambs/Kids (90 lb.)			1.6	-
TOTAL (IG/day)				60,000
*** TOTAL with 10% wash water				66,000

* For beef, dairy, bison and horse enterprises:
Use summer numbers if appropriate for the operation. Otherwise base projections on winter values.
Always use the greater of the two values.

** For intensive Dairy operations, please use the Dairy Barn Water Requirement Estimator found on separate sheet.

*** 10% of the total is added to allow for wash water

Other consumption:
Normal household consumption:
60-75 IG/day per person or
(272-340 l/day/person)

Enter this number on page 7 of Application Form.

Unit Conversions		
Total per day	Total per year	Unit
66,000	24,090,000	IG
272,760	99,557,400	litres
0.273	100	cubic decametres (dam ³)

Enter this number on page 7 of Application Form.

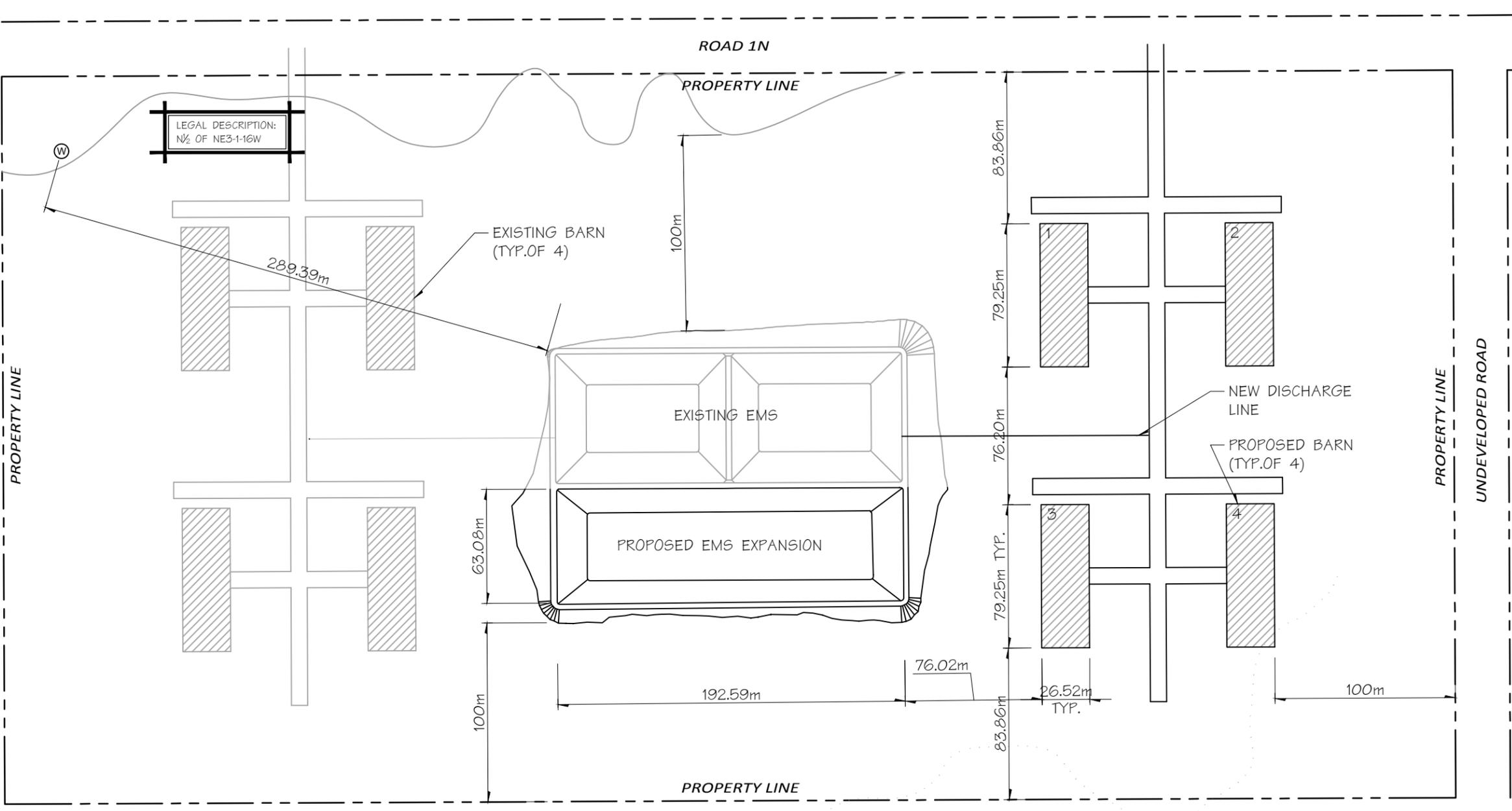
Conversion Factor: 1 IGPM = 4.546 l/m

Animal Type (A)	Animal Sub-type (B)	Daily Manure Production				Production Period ² (Days) (G)	Number of Animals ³ (Capacity) (H)	Total Manure Volume (ft ³) (F×G×H)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)						
		References (C)	Manure Type (D)	Default Manure Production (ft ³ /animal/day) (E)	Operation Manure Production ¹ (ft ³ /animal/day) (F)										
										Default Manure Production (ft ³ /year/bird space)	Operation Manure Production ¹ (ft ³ /year/bird space)				
Dairy (milking cows ⁴ and associated livestock)	Free Stall		Semi-Solid ⁵	3.5				0.0							
			Solid	3.4											
			Liquid ⁵	3.5				0.0							
			Semi-Solid ⁵	3.6				0.0							
			Solid	3.5											
			Liquid ⁵	3.6				0.0							
			Solid	3.0											
			Liquid	0.5											
			Solid	1.2											
			Solid	0.73											
Beef	Backgrounder (200 day)	Table 6, pg 59, FPGs for Dairy 1995	Solid	0.85											
	Summer pasture / replacement heifers	pg 117, FPGs for Hogs 1998	Solid	1.1											
	Feeder cattle		Solid	2.3				0.0							
	Sows - farrow to finish (234 - 254 lbs)		Liquid	0.8				0.0							
Pigs	Sows - farrow to wean (up to 11 lbs)	MAFRI website, FPGs for Pigs 2007	Liquid	1				0.0							
	Sows - farrow to nursery (51 lbs)		Liquid	0.1				0.0							
	Weanlings, Nursery (11 - 51 lbs)		Liquid	0.25		20,000	2,000,000.00	12,460,000.0							
	Grower / Finisher (51 - 249 lbs)		Liquid	0.25											
Animal Type	Type of Operation		Yearly Manure Production		Production Period ² (Days)	Number of Birds ³ (Capacity)	Total Manure Volume (ft ³) (F/365×G×H)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)							
			Default Manure Production (ft ³ /year/bird space)	Operation Manure Production ¹ (ft ³ /year/bird space)											
			Chickens	Broilers – floor ⁶					1.23						
				Broiler breeder hens ⁷					2.3						
				Broiler breeder pullets ⁶					0.99						
				Roasters – floor ⁶					1.16						
				Layers – cage ⁸					2.33					0.0	
				Layers – floor ⁷					1.68						
				Layers – solid pack ⁹											
				Pullets – cage ⁶					0.71						
				Pullets – floor ⁶					0.75						
				Pullets – solid pack ⁹											
			Turkeys	Broilers ⁶					Table 3, pg 85, FPGs for Poultry 2000		2.83				
				Heavy toms ⁶							5.58				
				Heavy hens ⁶							3.32				

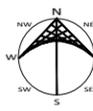
Sizing of a manure storage facility in accordance with all requirements of the *Livestock Manure and Mortalities Management Regulation* (M.R. 47/98) is the responsibility of the operator.

Instructions and footnotes:

- ENTER the manure production estimate for your operation. If no estimate is available, use the default value provided in column E. References for default daily and yearly manure production are provided in column C.
- 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 250
- ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).
- Milking cows includes all lactating and dry cows.
- Default manure production estimates for semi-solid and liquid dairy manure include manure and washwater from the milking parlour.
- 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/ft³
- One-third litter floor, two-thirds slatted floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/ft³
- Manure removed from barn at 90% moisture content with a density of 59 lb/ft³
- Poultry operations using litter (solid pack) must provide an estimate of yearly manure production



SITE DEVELOPMENT - GENERAL SITE	
ITEM	SYMBOL
PROPERTY LINE	---
WATER WELL	(W)
PIEZOMETER	(P)



SOUTHGATE SITE LAYOUT

SCALE: 1:2500

ISSUE (AND REVISION)		
NO.	DATE	DESCRIPTION
1	12/5/2017	ISSUED FOR CU PERMIT

ENGINEER'S SEAL

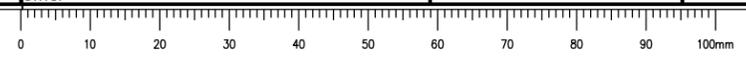
ISSUED FOR CU PERMIT

DGH ENGINEERING LTD.
 Professional Service | Practical Solutions
 12 Aviation Boulevard St. Andrews MB R1A 3N5 Canada
 T: 204-334-8846 F: 204-334-6965

CLIENT HYLIFE LTD. BOX 100 LA BROQUERIE, MB ROA OWO		
DESIGNED	DRAWN	COORDINATOR
NOV/2017	AS NOTED	

PROJECT TITLE SOUTHGATE SITE	
PROJECT LOCATION	
PROJECT NUMBER:	
SITE LAYOUT	

C1
REV. 000



If available, indicate the dimensions of any proposed manure storage facility (MSF) that will be used to store manure from the proposed project:

CELL	Proposed Manure Storage Facility Dimensions						Storage Capacity (days)
	Width	Length	Depth	Height (Above Grade)	Slope (H:L)		
					Inside	Outside	
Primary	ft	ft	ft	ft			
Secondary	ft	ft	ft	ft			
Tertiary	200 ft	630 ft	13 ft	ft	1:4	1:5	184
Circular Tank		Diameter	Height	Depth			
		ft	ft	ft			

The construction, modification or expansion of any manure storage structure requires a permit from Manitoba Sustainable Development as per the *Livestock Manure and Mortalities Management Regulation (M.R. 42/98)*.

The proposed site is rolling. The height of the EMS will be verified on site.



Manure Application Field Characteristics Table - Southgate

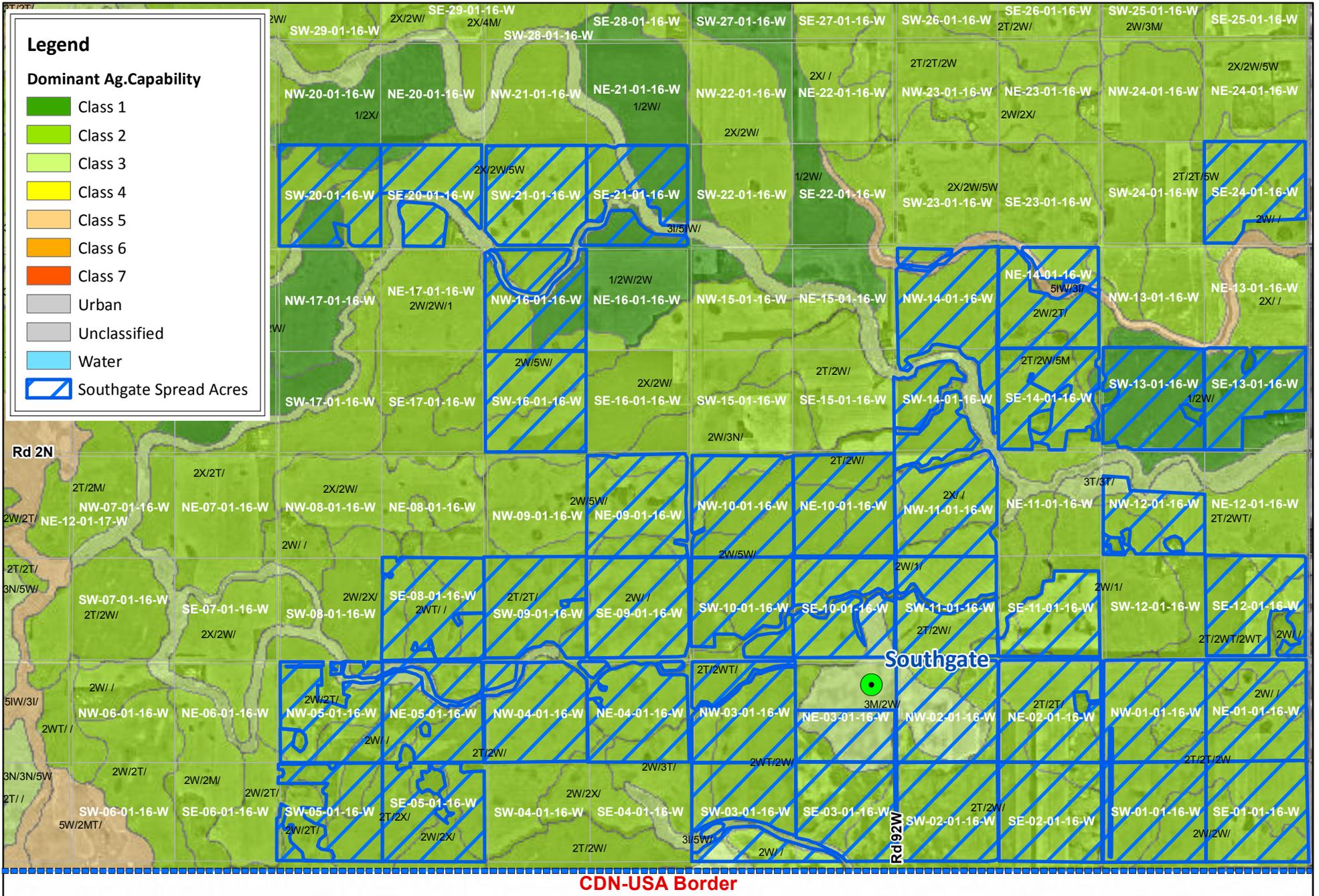
	A	B	C	D	E	F	G	H	I	J
Field	Legal Description	Rural Municipality	O/C/ L/A	Total Acreage	Setbacks	Net Acreage For Application	Ag Capability Class/Subclass	Soil Phos (0- 6" Olsen ppm)	Development Plan Designation	Zoning
1	NE-01-01-16-W	Killarney-Turtle Mountain	A	160	1	159	2WT	30	Rural Area	AG - Agricultural General
2	NE-02-01-16-W	Killarney-Turtle Mountain	A	160	1	159	2TW	10	Rural Area	AG - Agricultural General
3	NE-03-01-16-W	Killarney-Turtle Mountain	A	80	0	80	3M/2WT	12	Rural Area	AG - Agricultural General
4	NE-04-01-16-W	Killarney-Turtle Mountain	A	160	10	150	2TW/3T	11	Rural Area	AG - Agricultural General
5	NE-05-01-16-W	Killarney-Turtle Mountain	A	160	16	144	2WT/3I/5IW	7	Rural Area	AG - Agricultural General
6	NE-09-01-16-W	Killarney-Turtle Mountain	A	160	2	158	2W/3N/5W	8	Rural Area	AG - Agricultural General
7	NE-10-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2WT/1/5W	11	Rural Area	AG - Agricultural General
8	NE-14-01-16-W	Killarney-Turtle Mountain	A	160	17	143	2WT/5IW/3I	7	Rural Area	AG - Agricultural General
9	NW-01-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2TW	34	Rural Area	AG - Agricultural General
10	NW-02-01-16-W	Killarney-Turtle Mountain	A	160	0	160	3M/2WT	9	Rural Area	AG - Agricultural General
11	NW-03-01-16-W	Killarney-Turtle Mountain	A	160	1	159	2WT/3T	10	Rural Area	AG - Agricultural General
12	NW-04-01-16-W	Killarney-Turtle Mountain	A	160	8	152	2TW	8	Rural Area	AG - Agricultural General
13	NW-05-01-16-W	Killarney-Turtle Mountain	A	160	20	140	2WT/3I/5IW	7	Rural Area	AG - Agricultural General
14	NW-10-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2WT/3N/5W	8	Rural Area	AG - Agricultural General
15	NW-11-01-16-W	Killarney-Turtle Mountain	A	160	12	148	2TWX/1	10	Rural Area	AG - Agricultural General
16	NW-12-01-16-W	Killarney-Turtle Mountain	A	160	64	96	2WT/1/3T	5	Rural Area	AG - Agricultural General
17	NW-14-01-16-W	Killarney-Turtle Mountain	A	160	3	157	2TW/5MIW/3I	20	Rural Area	AG - Agricultural General
18	NW-16-01-16-W	Killarney-Turtle Mountain	A	160	12	148	2W/5M/1	7	Rural Area	AG - Agricultural General
19	SE-01-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2TW	27	Rural Area	AG - Agricultural General
20	SE-02-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2TW	16	Rural Area	AG - Agricultural General
21	SE-03-01-16-W	Killarney-Turtle Mountain	A	160	17	143	2WT/3M	11	Rural Area	AG - Agricultural General
22	SE-05-01-16-W	Killarney-Turtle Mountain	A	160	17	143	2WTX	3	Rural Area	AG - Agricultural General
23	SE-08-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2WTX	6	Rural Area	AG - Agricultural General
24	SE-09-01-16-W	Killarney-Turtle Mountain	A	160	2	158	2W/5W	11	Rural Area	AG - Agricultural General
25	SE-10-01-16-W	Killarney-Turtle Mountain	A	160	15	145	2WT/1/3M	7	Rural Area	AG - Agricultural General
26	SE-11-01-16-W	Killarney-Turtle Mountain	A	160	52	108	2WT/1	16	Rural Area	AG - Agricultural General
27	SE-12-01-16-W	Killarney-Turtle Mountain	A	160	18	142	2WT	7	Rural Area	AG - Agricultural General
28	SE-13-01-16-W	Killarney-Turtle Mountain	A	160	38	122	1/2W	6	Rural Area	AG - Agricultural General
29	SE-14-01-16-W	Killarney-Turtle Mountain	A	160	23	137	2TW/5M	5	Rural Area	AG - Agricultural General
30	SE-20-01-16-W	Killarney-Turtle Mountain	A	160	45	115	2XW/5W/1	6	Rural Area	AG - Agricultural General
31	SE-21-01-16-W	Killarney-Turtle Mountain	A	160	29	131	1/2WX/5W	7	Rural Area	AG - Agricultural General
32	SE-24-01-16-W	Killarney-Turtle Mountain	A	160	22	138	2TW/5W	11	Rural Area	AG - Agricultural General

33	SW-01-01-16-W	Killarney-Turtle Mountain	A	160	1	159	2TW	28	Rural Area	AG - Agricultural General
34	SW-02-01-16-W	Killarney-Turtle Mountain	A	160	0	160	2TW	13	Rural Area	AG - Agricultural General
35	SW-03-01-16-W	Killarney-Turtle Mountain	A	160	7	153	2WT/3I/5W	8	Rural Area	AG - Agricultural General
36	SW-05-01-16-W	Killarney-Turtle Mountain	A	160	42	118	2WTX	5	Rural Area	AG - Agricultural General
37	SW-09-01-16-W	Killarney-Turtle Mountain	A	160	8	152	2WT	4	Rural Area	AG - Agricultural General
38	SW-10-01-16-W	Killarney-Turtle Mountain	A	160	21	139	2WT/5W	8	Rural Area	AG - Agricultural General
39	SW-11-01-16-W	Killarney-Turtle Mountain	A	160	11	149	2TW/1	8	Rural Area	AG - Agricultural General
40	SW-13-01-16-W	Killarney-Turtle Mountain	A	160	9	151	1/2W	6	Rural Area	AG - Agricultural General
41	SW-14-01-16-W	Killarney-Turtle Mountain	A	160	46	114	2TW	9	Rural Area	AG - Agricultural General
42	SW-16-01-16-W	Killarney-Turtle Mountain	A	160	2	158	2WX/5W	4	Rural Area	AG - Agricultural General
43	SW-20-01-16-W	Killarney-Turtle Mountain	A	160	3	157	2WX/1	7	Rural Area	AG - Agricultural General
44	SW-21-01-16-W	Killarney-Turtle Mountain	A	160	8	152	2XW/5W	7	Rural Area	AG - Agricultural General

**Total Net
Acreage for**

6357

Southgate [NE-03-01-16W] - Spread Acres with Ag. Capability



Prepared by:
Matt Reimer
 Manager of Agronomic Services
 Hylife Ltd.

CROP ROTATION TABLE



A	B	C	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Total Net Acreage for Manure Application				

- A. List all of the crop(s) to be grown in the rotation on the acreage that will receive manure.
- B. Indicate the average acreage for each crop over the rotation. For example, if there are 720 suitable acres available for manure and approximately 40 these acres will be used to grow canola, enter 288. The total of column B should add up to Total Net Acreage for Manure Application provided in the Manure Application Field Characteristic Table.
- C. Enter the historical yield average for each crop. Long-term yield averages can be determined using MASC data (<http://www.masc.mb.ca/masc.nsf/index.html?OpenPage>) or on-farm yield records. If on-farm yield records are used, please provide copies.
- D. Enter the units for the yields provided (e.g. bu/acre, tons/acre).
- E. Enter the source of the historical yield average provided.

Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake
	P2O5	N	N	Units				(lb)	(lb)	(lb)
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
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	37.6	bu/ac	1266	49506	91871	151849
Corn Grain	0.44	0.97	1.53	lb/bu	115	bu/ac	127	6426	14167	22346
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
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	37.8	bu/ac	253	8033	37010	49730
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	53.6	bu/ac	886	28019	71234	100203
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
Sub Total							2532	91984	214283	324127
Estimated Average Removal/Uptake (lb/ac)								36.3	84.6	128.0
Additional Acres										
Crop Planned on Additional Acres										
Total Acreage							2532			

Note: Additional acres include acres for which crop removal or soil data is limited or unavailable.

Last revised August 20, 2014

Nutrients Excreted		lbs
Nitrogen		518187
P2O5		256019
Crop Nutrient Use		lb/ac
Nitrogen Uptake		128.0
P2O5 Removal		36.3
Land Base Requirements		acres
Acres for Nitrogen Uptake		4048
Acres for 2 x P2O5 Removal		3524
Acres for 1 x P2O5 Removal		7048

Pig/Operation Type	Storage Type	Volatilization	Animal Numbers (Places)	Weight In (lb)	Weight Out (lb)	Average Animal Wt (lb)	Days on Feed per Cycle (days)	Number of Cycles for the Place per Year (days)	Feed Consumed Per Pig Per Day (kg/day)	Protein %	N Excreted Per Herd Adjusted for Storage N (lb/yr/herd)	Phosphorus Content of Feed (DM) %	P2O5 Excreted Per Herd Per Year (lb/yr/herd)
Gestating Sow	Liquid Uncovered Earthen	30%		447	630	539	121	3	2.3	14%	0	0.53%	0
Nursing Sow	Liquid Uncovered Earthen	30%		539	539	539	21	15.2	6.5	20%	0	0.63%	0
Nursing Litter	Liquid Uncovered Earthen	30%		3.1	13.6	8	21	15.2	0	n/a	0	n/a	0
Live Cull Sow	Liquid Uncovered Earthen	30%		630	630	630	14	26.1	2.3	14%	0	0.46%	0
Bred Gilt	Liquid Uncovered Earthen	30%		340	447	394	121	3	2.3	14%	0	0.53%	0
Gilts (Purchased)	Liquid Uncovered Earthen	30%		290	340	315	28	13.0	3.2	16%	0	0.46%	0
Boars (Purchased)	Liquid Uncovered Earthen	30%		270	660	465	365	1	2.5	14%	0	0.46%	0
Weanlings	Liquid Uncovered Earthen	30%		13.6	61.6	38	52	6.9	0.7	20%	0	0.64%	0
Growers/Finishers	Liquid Uncovered Earthen	30%	20,000	61.6	280	171	112	3	2.8	16%	518187	0.46%	256019
Sows, farrow to 6.2 kg	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0

Last Revised April 13, 2016

Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake
	P2O5	N	N	Units				P2O5 (lb)	N (lb)	N (lb)
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
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	37.6	bu/ac	3179	124312	230694	381302
Corn Grain	0.44	0.97	1.53	lb/bu	115	bu/ac	318	16091	35473	55952
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
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	37.8	bu/ac	636	20194	93038	125012
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	53.6	bu/ac	2224	70332	178810	251526
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
Sub Total							6357	230928	538014	813792
Estimated Average Removal/Uptake (lb/ac)								36.3	84.6	128.0
Additional Acres										
Crop Planned on Additional Acres										
Total Acreage							6357			

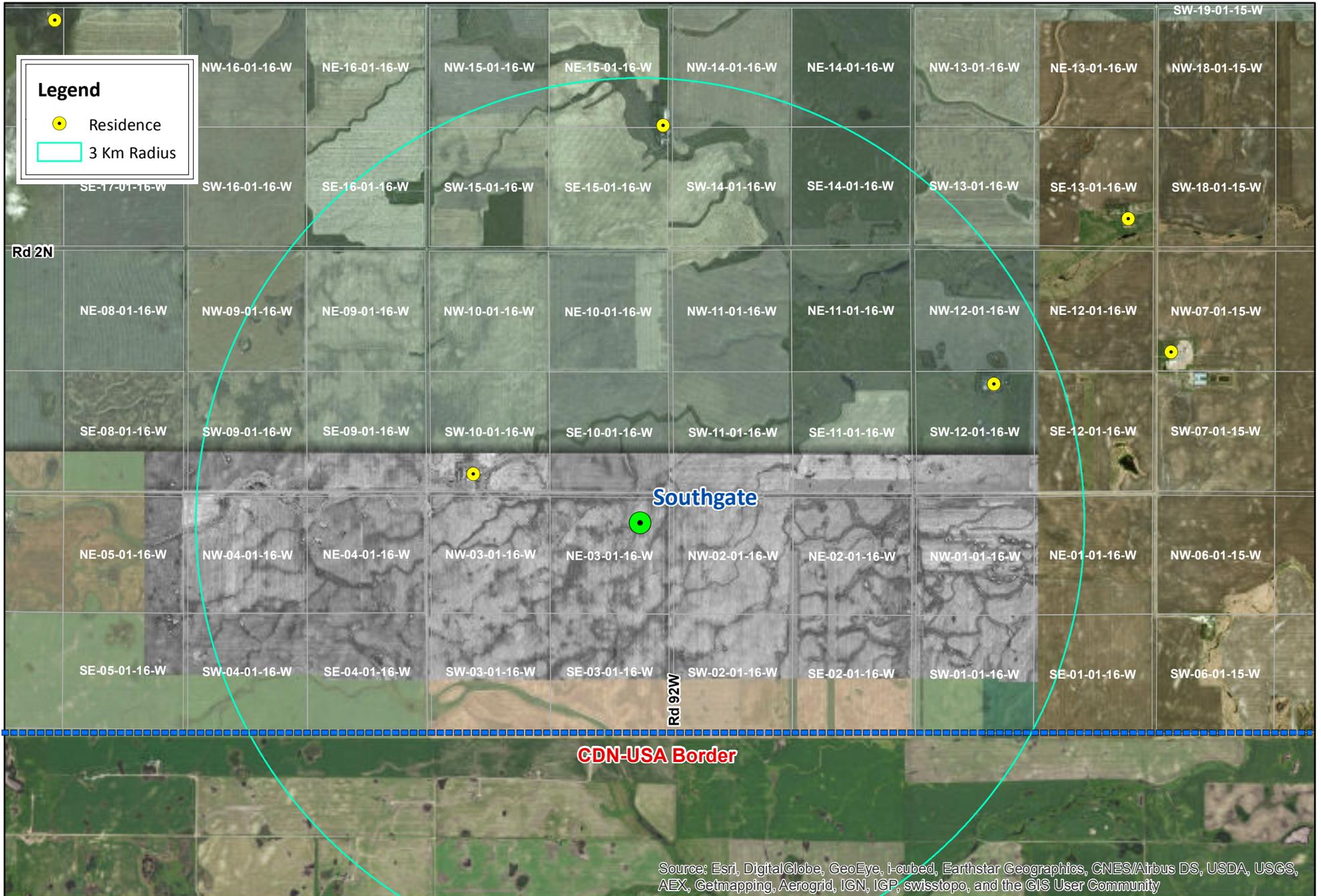
Note: Additional acres include acres for which crop removal or soil data is limited or unavailable.

Last revised August 20, 2014

Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
Gestating Sow	0	0
Nursing Sow	0	0
Nursing Litter	0	0
Live Cull Sows	0	0
Bred Gilts	0	0
Gilts	0	0
Boars	0	0
Weanlings	0	0
Growers/finishers	518187	256019
Sows, farrow to 5 kg	0	0
Sows, farrow to 23 kg	0	0
Sows, farrow to finish	0	0
Mature Cows (>2 years old)	0	0
Bred Heifer (14 mo - 2 years)	0	0
Replacement Heifers (7 mo-14 mo)	0	0
Unweaned Calves (0-7 mo)	0	0
Bulls	0	0
Mature Cows and Bred Heifers, plus associated livestock	0	0
Feedlot Cattle - long keep	0	0
Feedlot Cattle - short keep	0	0
Backgrounders - pasture	0	0
Backgrounders - confined	0	0
Lactating cow	0	0
Dry cow	0	0
Calf, 0-3 months	0	0
Calf, 4-13 months	0	0
Replacements, >13 months	0	0
Mature Cows, plus assoc livestock	0	0
Ewes	0	0
Replacement Ewes	0	0
Rams	0	0
Lambs	0	0
Ewes, plus assoc livestock	0	0
Feeder	0	0
Broilers	0	0
Broiler Breeder Pullets	0	0
Broiler Breeder Hens	0	0
Layer Pullets	0	0
Layer Hens	0	0
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
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	518187	256019

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

Southgate [NE-03-01-16W] - Residence within 3 KM

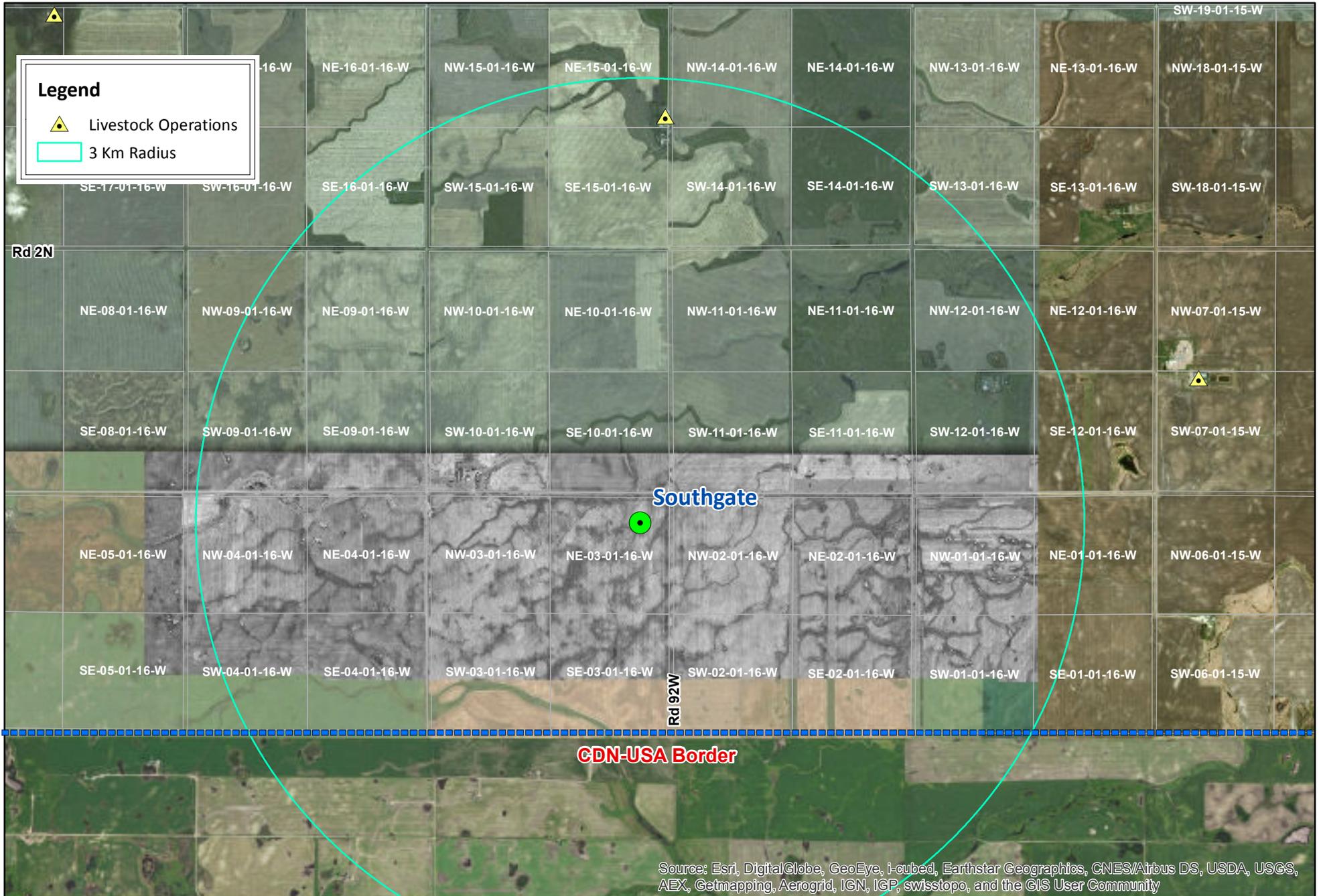


Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



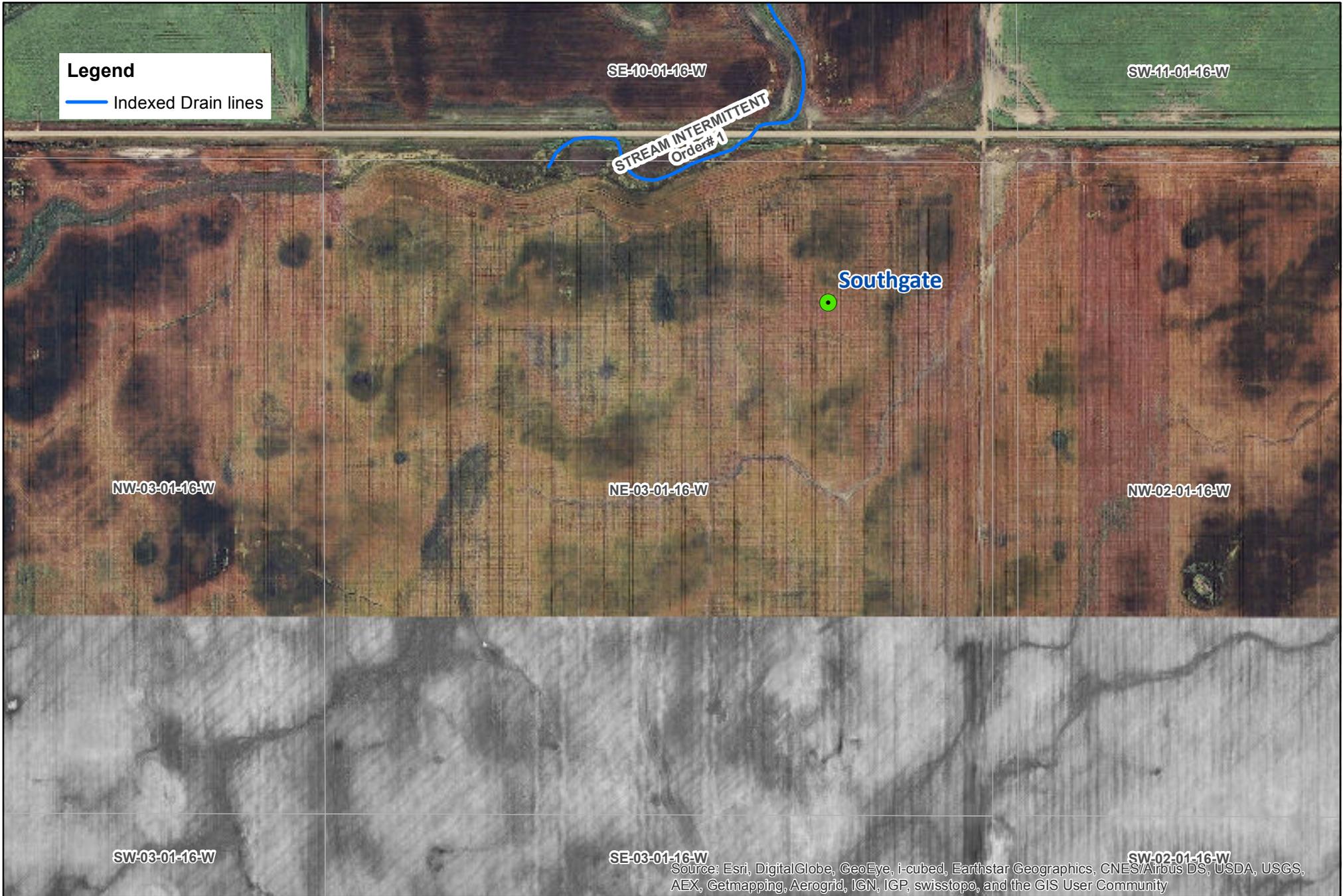
Prepared by:
Matt Reimer
 Manager of Agronomic Services
 Hylife Ltd.

Southgate [NE-03-01-16W] - Livestock Operations within 3 KM



Prepared by:
Matt Reimer
 Manager of Agronomic Services
 Hylife Ltd.

Southgate - Surface Water Drainage



0 0.125 0.25 0.5 Miles



Prepared by:
Mary-Jane Orr
Nutrient Management Specialist
Hylife Ltd.

RE: Identification of Species at Risk for Proposed HyLife Livestock Operations - Southgate

Inbox X

From: Friesen, Chris (SD) <Chris.Friesen@gov.mb.ca>

Oct 3, 2017

Hi Peter

Ken's conclusion of no concerns for species at risk would also apply to the proposed Southgate operation.

Chris Friesen
Coordinator
Manitoba Conservation Data Centre
[204-945-7747](tel:204-945-7747)
chris.friesen@gov.mb.ca
<http://www.manitoba.ca/conservation/cdc/>

From: De Smet, Ken (SD)
Sent: September-29-17 12:49 PM
To: Friesen, Chris (SD) <Chris.Friesen@gov.mb.ca>; Peter Mah <petermahinc@gmail.com>
Cc: Sheldon Stott <Sheldon.Stott@hylife.com>
Subject: RE: Identification of Species at Risk for Proposed HyLife Livestock Operations - Napa

Hi Chris & Peter

Just talked with Peter about the hog operation and the species/areas that we had identified as possible concerns.

Since neither Bobolink nor Loggerhead Shrike utilize cropland to any extent for nesting, and since most or all of the proposed spreading would occur after the nesting season, I see no concerns for either species.

CheersKen

Office: [\(204\) 945-5439](tel:204-945-5439)
Fax: [\(204\) 945-3077](tel:204-945-3077)
E-mail: Ken.DeSmet@gov.mb.ca

From: Friesen, Chris (SD)
Sent: September-29-17 8:13 AM
To: Peter Mah <petermahinc@gmail.com>
Cc: Sheldon Stott <Sheldon.Stott@hylife.com>; De Smet, Ken (SD) <Ken.DeSmet@gov.mb.ca>
Subject: Re: Identification of Species at Risk for Proposed HyLife Livestock Operations - Napa

Hi Peter

The best person to speak with regarding these bird occurrences is Ken De Smet (copied) if he hasn't already contacted you.

Cheers

Chris

From: "Friesen, Chris (SD)" <Chris.Friesen@gov.mb.ca>
To: "'Peter Mah'" <petermahinc@gmail.com>
Cc: "'Sheldon Stott'" <Sheldon.Stott@hylife.com>
Bcc:
Date: Mon, 18 Sep 2017 15:35:52 +0000
Subject: RE: Last 2 HyLife Spread Field maps - Southgate

Peter

Thank you for your information request. I completed a search of the MB Conservation Data Centre rare species database which resulted in the following occurrences:

Bobolink

SW 5-1-16W

SW 9-1-16W

Further information on this ranking system can be found on our website at <http://www.gov.mb.ca/conservation/cdc/consranks.html> and these designations can be found at <http://web2.gov.mb.ca/laws/statutes/ccsm/e111e.php>, <http://www.cosewic.gc.ca/> and http://www.sararegistry.gc.ca/default_e.cfm.

Manitoba's recommended setback distances can be found at <http://www.gov.mb.ca/conservation/cdc/pubs.html>

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 our scientists and reflects 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) 945-7747**.

Chris Friesen
Coordinator
Manitoba Conservation Data Centre
204-945-7747
chris.friesen@gov.mb.ca
http://www.manitoba.ca/conservation/cdc/

SECTION 14.0 ADDITIONAL INFORMATION

Additional Notes to Section 7.2 Water Source

- Southgate's existing approved operation will be supplied by water from an existing well located in the NW 1/4 of 3-1-16w.
- This well will continue to be used until the proposed expansion is built. Once completed, a new well will be developed at the well location shown on the proposed site layout map which will be approximately 274 m from the existing earthen manure storage facility.

Additional Notes to Section 7.5 Groundwater Protection

- We safeguard ground water quality and supply by carefully managing all our operations in manner that meets strict environmental requirements.
- Barns are not located in groundwater pollution hazard areas identified by government and background studies to the local development plan.
- Manure nutrient is stored in an engineer designed and certified earthen storage and is approved by Manitoba Sustainable Development before use.
- HyLife will monitor test samples from the sump pit that connects to the tile drainage system around the proposed earthen manure storage perimeter. Test sampling results will be submitted annually to Manitoba Sustainable Development.
- HyLife will comply fully within the approved annual groundwater withdrawal limit set by Manitoba Sustainable Development's Water Licensing Branch.

Additional Notes to Section 8.4 Odour Control Measures

- Odour is best managed through barn cleanliness and hygiene which is accomplished through barn design (pen configurations), the barn environment (temperature and air flow) in the barns and management.
- We have incorporated current technology for ventilation and climate control in the barns for the comfort of pigs and ensuring a clean environment.
- The equipment is being used in other HyLife barns and has a proven track record of success,

Additional Notes to Section 8.5 Manure Treatment

- Previous criteria and Confirmation Letter from Manitoba Pork Council relating to the Hog Production Pilot Protocol is no longer applicable.

Additional Notes to Section 8.6 Manure Application Method

- A coulter or Aerway applicator system will be used which penetrates the soil surface and allows the liquid manure to be incorporated immediately to maximize soil absorption.
- Annual manure nutrient management plans are prepared by qualified manure management planners, approved by government and applied as a crop fertilizer by GPS monitored equipment by certified applicators.

Additional Notes to Section 10

Project Site Description: Land Use Planning Considerations

- We have carefully explored potential development sites in the Killarney area. HyLife chose this proposed site because it is firstly on open, designated agricultural crop land that is being actively farmed. Thus neighbouring farmers will be able to sustainably utilize the manure as fertilizer for crop production. In turn, area farmers will be able to reduce their crop fertilizer input costs.
- This site also has good road access, hydro, good drainage, good topography, and groundwater supply. This site also allows us to exceed all government siting and setback requirements from residences and designated land uses and designated crown land.
- We also meet and indeed for the most part, exceed all provincial manure storage separation distances from property boundaries set by Manitoba regulations.
- The site is also situated within the Municipality of Killarney-Turtle Mountain that affords not only a good employable population but which provides important community and commercial services and close proximity to our new \$30 million HyLife feed mill.
- Local farmers will also benefit by having have a local opportunity to sell more feed crops to the new HyLife feed mill.

Additional Notes to Section 11.0 Truck Haul Routes and Access Points

- For this 10,000 head pork production operation expansion, there will typically be 8 to 12 feed trucks and 2 to 3 livestock trucks per week.
- The Municipality already maintains an existing network of municipal roads in the rural area and will determine which route we will use.

Additional Notes:

HyLife Community Consultation on Development Site & Proposal

- We have reached out to inform the community about our prospective plans in the area. In mid-September and early October, 2017 we met and talked to as many area farmers and residents around the proposed site while we were conducting alternative site investigations and geo-technical soil and ground water testing.
- HyLife also held an informal Public Open House on our development proposals on November 8th, 2017 to further inform residents and stakeholders in the community. While it was not requirements to consult early with neighbours in the site area nor to hold a Public Open House, we felt it was important to inform the community and to obtain their feedback.
- HyLife will continue to use our "best efforts to be a good neighbour" and good corporate citizen in the Killarney-Turtle Mountain community.

Groundwater Exploration Permit

Pursuant to The Water Rights Act

Hylife Ltd.

is hereby permitted to construct a water well or wells on the following described lands to explore for groundwater in **13-1-17 WPM** for **agricultural** purposes, subject, however, to the following conditions:

1. The permittee must have legal access to the site where the exploration work and project wells are to be located.
2. This Authorization is not transferable or assignable to any other party.
3. Prior to undertaking any work or construction of any works authorized by this permit the permittee is required to retain the services of a hydrogeologist registered with Association of Professional Engineers and Geoscientists of Manitoba, who would be required to:
 - Plan and supervise the drilling of boreholes, test wells, production wells, observation wells and well pump testing as authorized by this permit.
 - Conduct a constant rate pumping test on proposed production well(s) in accordance with Form H (http://www.gov.mb.ca/conservation/waterstewardship/licensing/wlb/pdf/form_h_july_2013.pdf).
 - Conduct a recovery test for a period equal to pump test or 90% recovery.
 - Carry out an inventory of private and commercial wells within a 1600 m radius of the project well site. The inventory may need to be expanded based on the assessment of the expected area of water level drawdown impact resulting from future pumping.
 - Prepare and submit to the Water Use Licensing Section a technical report on drilling of boreholes and wells, pump testing of wells, well inventory and water quality sampling. The report would contain, but not limited to, such things as: well driller's reports for test wells, production wells; a plan showing the location of these wells on the property and/or GPS locations of the wells; an analysis of aquifer pumping tests; and calculations of transmissivity. The report would also indicate if any local wells are expected to be adversely affected by the proposed use of water and where these wells are located. Two copies of the report shall be submitted, one hardcopy and one digital copy.
4. During any pumping tests that may be conducted, pumping must cease immediately if any local water supplies are negatively impacted as a result of the tests. The permittee is also responsible to correct any water supply problems or provide temporary water supply to anyone whose water supplies are negatively impacted as a result of the tests.
5. This permit expires within twelve (12) months of the date of issuance.
6. Please note that diversion of water without a Water Rights Licence or written authorization would constitute a violation of The Water Rights Act and may be subject to enforcement.

Issued at the City of Winnipeg in the Province of Manitoba, this 15th day of SEPTEMBER, A.D. 2017


for The Honourable Minister of Conservation and Water Stewardship



HYLIFE™

5 Fabas Street, Box 100, La Broquerie, Manitoba R0A 0W0
p: 1.204.424.5359 f: 1.204.424.5177 www.hylife.com

September 12, 2017

Dear Neighbour / Resident

Re: Proposed HyLife Livestock Development Project

HyLife is a company which started back in the 1994 as a collaboration of 2 family farm operations. Our head office is located in La Broquerie, Manitoba. Today, we are a fully integrated company that produces and sells high quality pork products around the world. While pork is our passion, we recognize that much of our success depends on our ability to produce a sustainable supply of quality pigs on the farm in our local communities.

You know us in the Killarney-Turtle Mountain area simply as HyLife. We have been here since 2004; fully invested in the community with our operations including our livestock barns, local office and now the new Killarney feed mill under construction. But you may know us even better by the many local people we employ whose families call Killarney-Turtle Mountain as home.

We dropped by today in the hopes of introducing ourselves and our preliminary HyLife finisher barn project to you.

While no formal application has been made yet, we want you to have a first-hand opportunity to learn more about the project which we hope to propose. Unfortunately, we missed you this time and look forward to getting in touch with you soon.

We would be happy to sit down with you should you have any questions.

Please contact me at (204) 355-7775 or Peter Mah at (204) 771-5117 should you wish to arrange another time to meet.

Sincerely,

Sheldon Stott,

Director of Environmental Affairs, HyLife



Platinum Member - Canada's Best Managed Companies

Our Vision

We will be the BEST Canadian Food Company in the World

Core Values

- **Teamwork**
- **Do What We Say, Say What We Do**
- **Open Door Policy**
- **Respecting People**
- **Respecting Animals**
- **Turning Challenges into Opportunities**
- **Empowering People**
- **Striving to be the Best**
- **Community Partners**
- **Get 'er Done**
- **Sustainable Profitability**
- **Work Hard, Play Hard • Work Safe**

Mission Statement

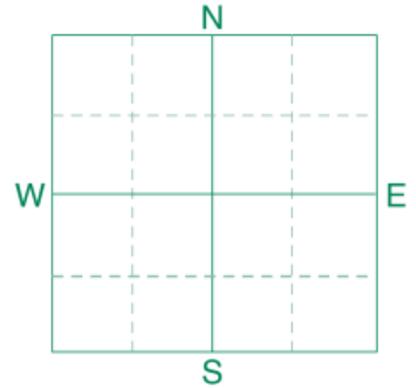
At HyLife we focus on developing our employees, providing quality products to our customers, and working in partnership with our community.



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

SOIL TEST REPORT

FIELD ID **SG1NE0380**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **3** QTR **NE** ACRES **80**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2143181** BOX # **0**
 LAB # **NW197976**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain				
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	29 lb/ac 45 lb/ac					50 BU	60 BU	160 BU						
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	74 lb/ac					Band		Band		Band				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	Olsen					N	101	N	88	N	118			
Phosphorus	12 ppm					P ₂ O ₅	33 Band *	P ₂ O ₅	27 Band *	P ₂ O ₅	40 Band *			
Potassium	216 ppm					K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *			
Chloride						Cl		Cl		Cl				
Sulfur	0-6" 6-24"					S	10 Band	S	0	S	0			
Boron						B		B		B				
Zinc						Zn		Zn		Zn				
Iron						Fe		Fe		Fe				
Manganese						Mn		Mn		Mn				
Copper						Cu		Cu		Cu				
Magnesium						Mg		Mg		Mg				
Calcium						Lime		Lime		Lime				
Sodium														
Org.Matter														
Carbonate(CCE)														
Sol. Salts	0-6"					Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	3.02 mmho/cm					0-6" 7.9				% Ca	% Mg	% K	% Na	% H
	6-24"					6-24" 8.1								
	3.27 mmho/cm													

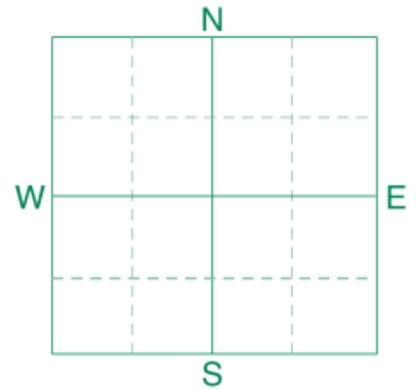
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NE04150**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **4** QTR **NE** ACRES **150**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2143183** BOX # **0**
 LAB # **NW197936**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	27 lb/ac	27 lb/ac			YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	54 lb/ac				50 BU		60 BU		160 BU		
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
						Band		Band		Band		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	11 ppm				N	121	N	108	N	138	
Potassium		191 ppm				P ₂ O ₅	35 Band *	P ₂ O ₅	29 Band *	P ₂ O ₅	44 Band *	
Chloride						K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac	360 +lb/ac			Cl		Cl		Cl		
Boron						S	10 Band	S	0	S	0	
Zinc						B		B		B		
Iron						Zn		Zn		Zn		
Manganese						Fe		Fe		Fe		
Copper						Mn		Mn		Mn		
Magnesium						Cu		Cu		Cu		
Calcium						Mg		Mg		Mg		
Sodium						Lime		Lime		Lime		
Org.Matter						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)						Buffer pH		% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6"	1.99 mmho/cm				0-6" 7.5						
	6-24"	2.76 mmho/cm				6-24" 8.1						

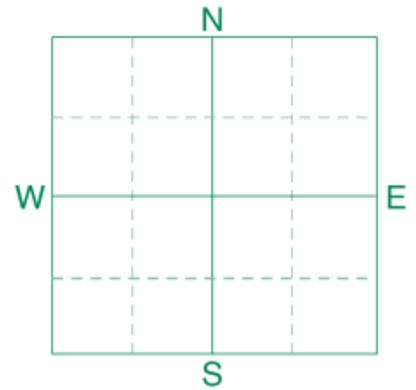
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NE09158**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **9** QTR **NE** ACRES **158**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143186** BOX # **0**
 LAB # **NW197938**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	18 lb/ac 36 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL		
	0-24"	54 lb/ac				50 BU	60 BU	160 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						Band	Band	Band	Band	Band	Band		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen	8 ppm	*****			N	121	N	108	N	138		
Potassium		220 ppm	*****			P ₂ O ₅	43 Band *	P ₂ O ₅	35 Band *	P ₂ O ₅	56 Band *		
Chloride						K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			Cl		Cl		Cl			
Boron						S	10 Band	S	0	S	0		
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6"	2.23 mmho/cm	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
	6-24"	2.63 mmho/cm	*****			0-6" 7.7			% Ca	% Mg	% K	% Na	% H
						6-24" 8.2							

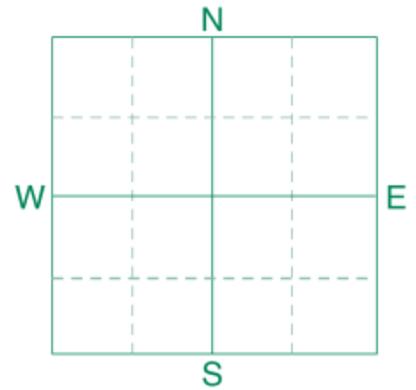
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NE10160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **10** QTR **NE** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2143188** BOX # **0**
 LAB # **NW197943**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	23 lb/ac 45 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24"	68 lb/ac	*****				50 BU		60 BU		160 BU		
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Band		Band		Band			
	Olsen	11 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus						N	107	N	94	N	124		
Potassium		189 ppm	*****				P ₂ O ₅	35 Band *	P ₂ O ₅	29 Band *	P ₂ O ₅	44 Band *	
Chloride						K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****				Cl		Cl		Cl		
Boron						S	10 Band	S	0	S	0		
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)						Buffer pH		% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	1.92 mmho/cm 2.6 mmho/cm	*****				0-6" 7.5						
			*****				6-24" 7.8						

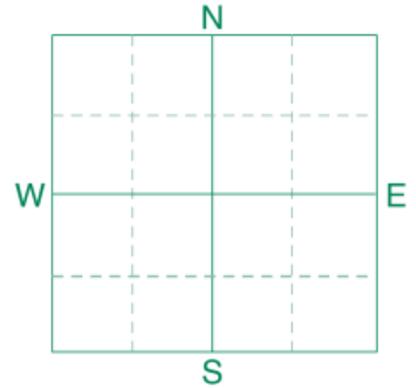
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1NW02160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **2** QTR **NW** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2143190** BOX # **0**
 LAB # **NW197975**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain		
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL		
	0-24"	*****				50 BU			60 BU			160 BU		
		*****				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
		*****				Band			Band			Band		
		*****				LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
Olsen	9 ppm	*****				N	114		N	101		N	131	
Phosphorus		*****				P ₂ O ₅	40	Band *	P ₂ O ₅	33	Band *	P ₂ O ₅	52	Band *
Potassium	148 ppm	*****				K ₂ O	14	Band *	K ₂ O	22	Band *	K ₂ O	31	Band *
Chloride		*****				Cl			Cl			Cl		
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0		S	0	
Boron		*****				B			B			B		
Zinc		*****				Zn			Zn			Zn		
Iron		*****				Fe			Fe			Fe		
Manganese		*****				Mn			Mn			Mn		
Copper		*****				Cu			Cu			Cu		
Magnesium		*****				Mg			Mg			Mg		
Calcium		*****				Lime			Lime			Lime		
Sodium		*****												
Org.Matter		*****												
Carbonate(CCE)		*****												
Sol. Salts	0-6"	*****				Soil pH	7.6		% Base Saturation (Typical Range)					
	6-24"	*****				Buffer pH	8.2		% Ca	% Mg	% 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

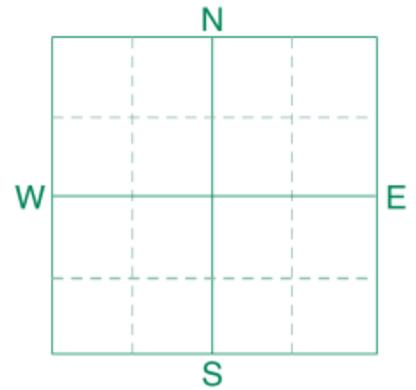
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NW03159**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **3** QTR **NW** ACRES **159**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143193** BOX # **0**
 LAB # **NW197971**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	15 lb/ac 24 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL		
	0-24"	39 lb/ac				50 BU	60 BU	160 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
Phosphorus	Olsen	10 ppm	*****			Band	Band	Band	Band	Band	Band		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Potassium		223 ppm	*****			N	136	N	123	N	153		
Chloride						P ₂ O ₅	38 Band *	P ₂ O ₅	31 Band *	P ₂ O ₅	48 Band *		
						K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			Cl		Cl		Cl			
Boron						S	10 Band	S	0	S	0		
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6"	2.68 mmho/cm	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
	6-24"	3.2 mmho/cm	*****			0-6" 8.0			% Ca	% Mg	% K	% Na	% H
						6-24" 8.2							

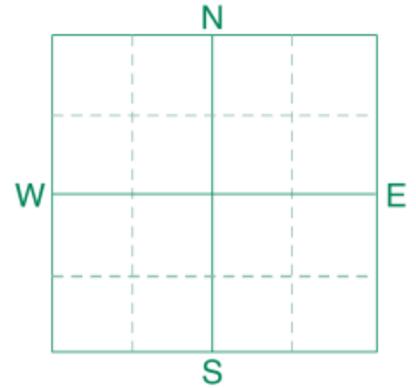
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Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NW04152**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **4** QTR **NW** ACRES **152**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143194** BOX # **0**
 LAB # **NW197934**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	24 lb/ac 30 lb/ac	*****			YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL	YIELD GOAL		
	0-24"	54 lb/ac				50 BU	60 BU	160 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		
						Band	Band	Band	Band	Band	Band		
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	8 ppm	*****				N	121	N	108	N	138		
Phosphorus						P ₂ O ₅	43 Band *	P ₂ O ₅	35 Band *	P ₂ O ₅	56 Band *		
Potassium	239 ppm	*****				K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Chloride						Cl		Cl		Cl			
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			S	10 Band	S	0	S	0		
Boron						B		B		B			
Zinc						Zn		Zn		Zn			
Iron						Fe		Fe		Fe			
Manganese						Mn		Mn		Mn			
Copper						Cu		Cu		Cu			
Magnesium						Mg		Mg		Mg			
Calcium						Lime		Lime		Lime			
Sodium													
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6"	1.65 mmho/cm	*****			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
	6-24"	2.28 mmho/cm	*****			0-6" 7.4			% Ca	% Mg	% K	% Na	% H
						6-24" 7.9							

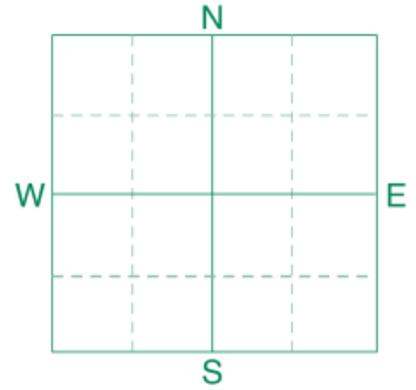
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NW10160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **10** QTR **NW** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143196** BOX # **0**
 LAB # **NW197940**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6" 6-24"	24 lb/ac 36 lb/ac	*****			Canola-bu		Wheat-Spring		Corn-Grain				
						YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	60 lb/ac				50 BU		60 BU		160 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Band		Band		Band				
Olsen	8 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus					N	115		N	102	N	132			
Potassium	194 ppm	*****			P ₂ O ₅	43	Band *	P ₂ O ₅	35	P ₂ O ₅	56	Band *		
Chloride					K ₂ O	0		K ₂ O	10	K ₂ O	10	Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****		Cl			Cl		Cl				
Boron					S	10	Band	S	0	S	0			
Zinc					B			B		B				
Iron					Zn			Zn		Zn				
Manganese					Fe			Fe		Fe				
Copper					Mn			Mn		Mn				
Magnesium					Cu			Cu		Cu				
Calcium					Mg			Mg		Mg				
Sodium					Lime			Lime		Lime				
Org.Matter					Soil pH		Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)										% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	1.71 mmho/cm 2.62 mmho/cm	*****		0-6"	7.6								
			*****		6-24"	8.2								

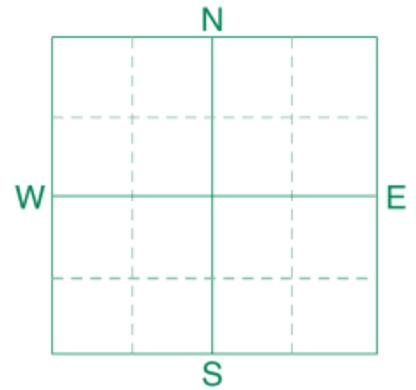
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NW11148**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **11** QTR **NW** ACRES **148**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143197** BOX # **0**
 LAB # **NW197942**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	16 lb/ac 21 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	37 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	10 ppm	N	138	N	125	N	155	
Potassium		225 ppm	P ₂ O ₅	38 Band *	P ₂ O ₅	31 Band *	P ₂ O ₅	48 Band *	
Chloride			K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
	0-6" 6-24"	0.74 mmho/cm 0.91 mmho/cm							
Sol. Salts			0-6" 7.5						
			6-24" 8.1						

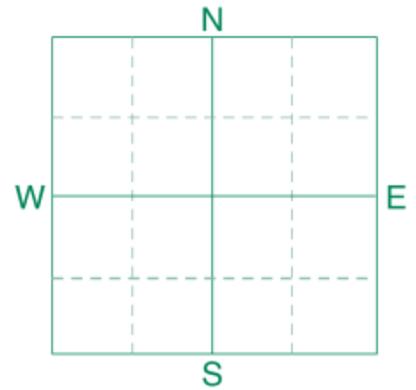
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1NW14177**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **14** QTR **NW** ACRES **177**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143198** BOX # **0**
 LAB # **NW197959**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	22 lb/ac 24 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	46 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen	20 ppm	*****	N	129		N	116		
Phosphorus		*****	P ₂ O ₅	13	Band *	P ₂ O ₅	15	Band (Starter)*	
Potassium	249 ppm	*****	K ₂ O	0		K ₂ O	10	Band (Starter)*	
Chloride			Cl			Cl			
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	S	10	Band	S	0		
Boron			B			B			
Zinc			Zn			Zn			
Iron			Fe			Fe			
Manganese			Mn			Mn			
Copper			Cu			Cu			
Magnesium			Mg			Mg			
Calcium			Lime			Lime			
Sodium									
Org.Matter									
Carbonate(CCE)									
Sol. Salts	0-6"	0.96 mmho/cm	Soil pH	7.1		% Base Saturation (Typical Range)			
	6-24"	1.34 mmho/cm	Buffer pH	7.8		% Ca	% Mg	% K	% Na

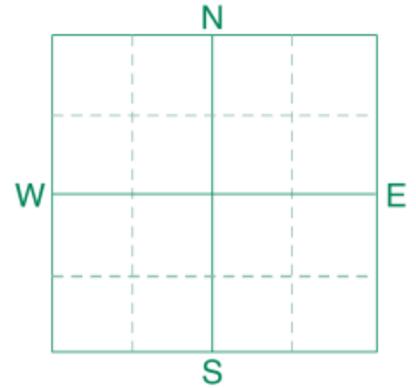
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SE03143**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **3** QTR **SE** ACRES **143**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2143200** BOX # **0**
 LAB # **NW197973**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	47 lb/ac 51 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	98 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	11 ppm	N	77	N	64	N	94	
Potassium		225 ppm	P ₂ O ₅	35 Band *	P ₂ O ₅	29 Band *	P ₂ O ₅	44 Band *	
Chloride			K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6"	3.52 mmho/cm	0-6"	8.0					
	6-24"	3.32 mmho/cm	6-24"	8.2					

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

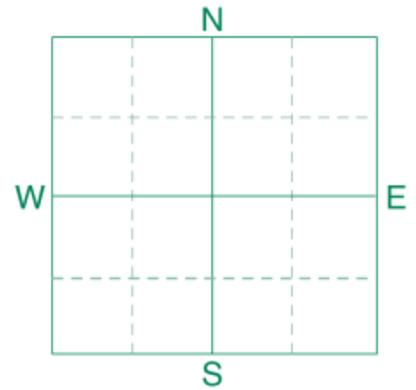
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SE09158**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **9** QTR **SE** ACRES **158**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143201** BOX # **0**
 LAB # **NW197937**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain				
Nitrate	0-6" 6-24"	20 lb/ac 24 lb/ac	*****											
	0-24"	44 lb/ac				YIELD GOAL	YIELD GOAL	YIELD GOAL						
						50 BU	60 BU	160 BU						
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES						
Phosphorus	Olsen	11 ppm	*****			Band		Band		Band				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium		191 ppm	*****											
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			N	131	N	118	N	148			
						P ₂ O ₅	35 Band *	P ₂ O ₅	29 Band *	P ₂ O ₅	44 Band *			
Chloride						K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *			
						Cl		Cl		Cl				
Boron						S	10 Band	S	0	S	0			
Zinc						B		B		B				
Iron						Zn		Zn		Zn				
Manganese						Fe		Fe		Fe				
Copper						Mn		Mn		Mn				
Magnesium						Cu		Cu		Cu				
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6"	3.04 mmho/cm	*****			0-6"	8.0							
	6-24"	3.47 mmho/cm	*****			6-24"	8.2							

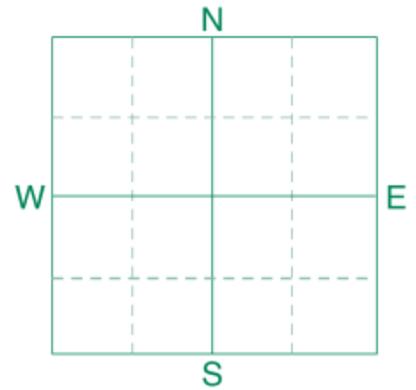
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SE10145**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **10** QTR **SE** ACRES **145**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2143202** BOX # **0**
 LAB # **NW197939**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain		
Nitrate	0-6" 6-24"	49 lb/ac	42 lb/ac			YIELD GOAL			YIELD GOAL			YIELD GOAL		
	0-24"	91 lb/ac				50 BU			60 BU			160 BU		
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
						Band			Band			Band		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Olsen	7 ppm					N	84		N	71		N	101	
Phosphorus						P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *	P ₂ O ₅	60	Band *
Potassium	154 ppm					K ₂ O	11	Band *	K ₂ O	19	Band *	K ₂ O	28	Band *
Chloride						Cl			Cl			Cl		
Sulfur	0-6" 6-24"	120 +lb/ac	360 +lb/ac			S	10	Band	S	0		S	0	
Boron						B			B			B		
Zinc						Zn			Zn			Zn		
Iron						Fe			Fe			Fe		
Manganese						Mn			Mn			Mn		
Copper						Cu			Cu			Cu		
Magnesium						Mg			Mg			Mg		
Calcium						Lime			Lime			Lime		
Sodium														
Org.Matter														
Carbonate(CCE)														
Sol. Salts	0-6"	2.23 mmho/cm				Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
	6-24"	2.18 mmho/cm				0-6" 7.7			% Ca	% Mg	% K	% Na	% H	
						6-24" 7.9								

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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

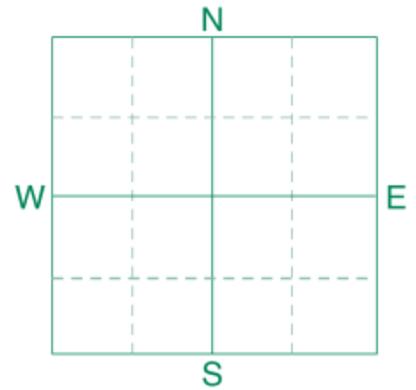
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SE11108**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **11** QTR **SE** ACRES **108**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143204** BOX # **0**
 LAB # **NW197941**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain				
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL				
						50 BU			60 BU			160 BU				
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Band			Band			Band				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Olsen	16 ppm	*****				N	139		N	126		N	156			
Phosphorus		*****				P ₂ O ₅	23	Band *	P ₂ O ₅	19	Band *	P ₂ O ₅	23	Band *		
Potassium	191 ppm	*****				K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *		
Chloride		*****				Cl			Cl			Cl				
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0		S	0			
Boron						B			B			B				
Zinc						Zn			Zn			Zn				
Iron						Fe			Fe			Fe				
Manganese						Mn			Mn			Mn				
Copper						Cu			Cu			Cu				
Magnesium						Mg			Mg			Mg				
Calcium						Lime			Lime			Lime				
Sodium																
Org.Matter																
Carbonate(CCE)																
Sol. Salts	0-6"	*****				Soil pH	Buffer pH		Cation Exchange Capacity			% Base Saturation (Typical Range)				
	6-24"	*****				0-6"	7.9					% Ca	% Mg	% K	% Na	% H
						6-24"	8.3									

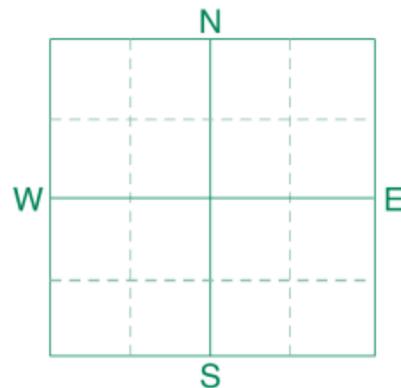
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SE20115**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **20** QTR **SE** ACRES **115**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143205** BOX # **0**
 LAB # **NW197962**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain			
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL			
			15 lb/ac 18 lb/ac				50 BU			60 BU			160 BU		
	0-24"		33 lb/ac				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
							Band			Band			Band		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		
Olsen	6 ppm	*****				N	142		N	129		N	159		
Phosphorus						P ₂ O ₅	48	Band *	P ₂ O ₅	39	Band *	P ₂ O ₅	65	Band *	
Potassium	208 ppm	*****				K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *	
Chloride						Cl			Cl			Cl			
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0		S	0		
Boron						B			B			B			
Zinc						Zn			Zn			Zn			
Iron						Fe			Fe			Fe			
Manganese						Mn			Mn			Mn			
Copper						Cu			Cu			Cu			
Magnesium						Mg			Mg			Mg			
Calcium						Lime			Lime			Lime			
Sodium															
Org.Matter															
Carbonate(CCE)															
Sol. Salts	0-6"	*****				Soil pH	Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"		1.64 mmho/cm 2.36 mmho/cm				0-6" 7.7				% Ca	% Mg	% K	% Na	% H
						6-24" 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 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

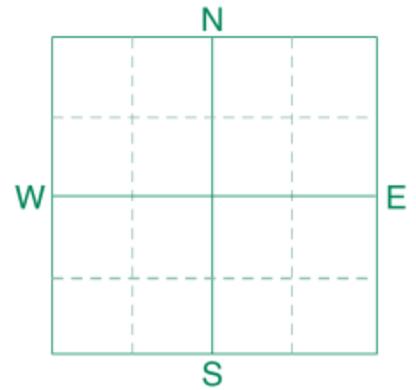
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SE21131**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **21** QTR **SE** ACRES **131**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143207** BOX # **0**
 LAB # **NW197969**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice						
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain						
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL						
						50 BU			60 BU			160 BU						
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES						
						Band			Band			Band						
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION					
Olsen Phosphorus	7 ppm	*****				N	136		N	123		N	153					
Potassium	187 ppm	*****				P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *	P ₂ O ₅	60	Band *				
Chloride						K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *				
Sulfur	0-6" 6-24"	*****				Cl			Cl			Cl						
						S	10	Band	S	0		S	0					
Boron						B			B			B						
Zinc						Zn			Zn			Zn						
Iron						Fe			Fe			Fe						
Manganese						Mn			Mn			Mn						
Copper						Cu			Cu			Cu						
Magnesium						Mg			Mg			Mg						
Calcium						Lime			Lime			Lime						
Sodium						Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)			
Org.Matter																		
Carbonate(CCE)																		
Sol. Salts	0-6" 6-24"	*****				0-6"	7.2											
						6-24"	8.0											

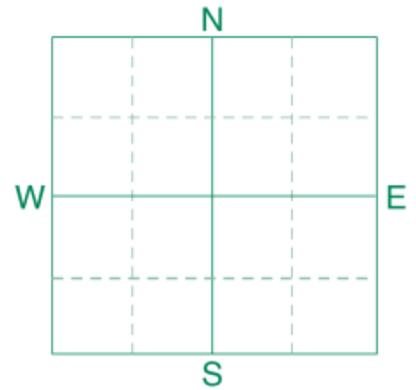
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SE24138**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **24** QTR **SE** ACRES **138**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2143208** BOX # **0**
 LAB # **NW197967**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow Low Med High								
Nitrate	0-6" 6-24"	22 lb/ac 27 lb/ac	*****	Canola-bu	Wheat-Spring		Corn-Grain			
	0-24"	49 lb/ac		YIELD GOAL	YIELD GOAL		YIELD GOAL			
				50 BU	60 BU		160 BU			
				SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
				Band	Band		Band			
			LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION			
Phosphorus	Olsen 11 ppm	*****	N 126	N 113	N 143					
Potassium	197 ppm	*****	P ₂ O ₅ 35 Band *	P ₂ O ₅ 29 Band *	P ₂ O ₅ 44 Band *					
Chloride			K ₂ O 0	K ₂ O 10 Band (Starter)*	K ₂ O 10 Band (2x2) *					
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****	Cl	Cl	Cl				
Boron			*****	S 10 Band	S 0	S 0				
Zinc				B	B	B				
Iron				Zn	Zn	Zn				
Manganese				Fe	Fe	Fe				
Copper				Mn	Mn	Mn				
Magnesium				Cu	Cu	Cu				
Calcium				Mg	Mg	Mg				
Sodium				Lime	Lime	Lime				
Org.Matter										
Carbonate(CCE)										
Sol. Salts	0-6"	1.4 mmho/cm	*****	Soil pH	Buffer pH	% Base Saturation (Typical Range)				
	6-24"	2.06 mmho/cm	*****	0-6" 7.5		% Ca	% Mg	% K	% Na	% H
				6-24" 7.9						

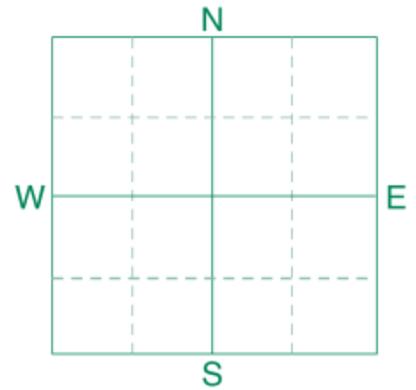
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SW02160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **2** QTR **SW** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2143210** BOX # **0**
 LAB # **NW197974**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain		
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL		
	24 lb/ac 45 lb/ac					50 BU			60 BU			160 BU		
	0-24"	*****				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
	69 lb/ac					Band			Band			Band		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Olsen	13 ppm	*****				N	106		N	93		N	123	
Phosphorus						P ₂ O ₅	30	Band *	P ₂ O ₅	25	Band *	P ₂ O ₅	36	Band *
Potassium	148 ppm	*****				K ₂ O	14	Band *	K ₂ O	22	Band *	K ₂ O	31	Band *
Chloride						Cl			Cl			Cl		
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0		S	0	
	120 +lb/ac 360 +lb/ac	*****				B			B			B		
Boron						Zn			Zn			Zn		
Zinc						Fe			Fe			Fe		
Iron						Mn			Mn			Mn		
Manganese						Cu			Cu			Cu		
Copper						Mg			Mg			Mg		
Magnesium						Lime			Lime			Lime		
Calcium						Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Sodium						Buffer pH			% Ca	% Mg	% K	% Na	% H	
Org.Matter						0-6" 7.6								
Carbonate(CCE)						6-24" 8.1								
Sol. Salts	0-6" 6-24"	*****												
	2.96 mmho/cm 3.38 mmho/cm	*****												

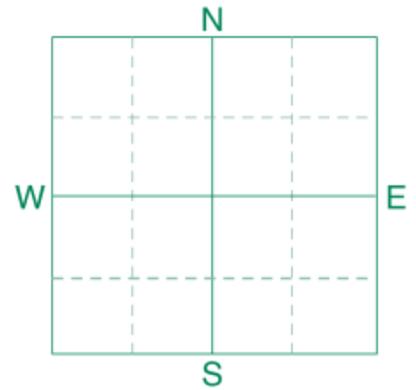
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SW03153**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **3** QTR **SW** ACRES **153**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2143211** BOX # **0**
 LAB # **NW197935**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	19 lb/ac 30 lb/ac					50 BU	60 BU	160 BU					
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	49 lb/ac					Band		Band		Band			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	8 ppm	*****				N	126	N	113	N	143		
Phosphorus						P ₂ O ₅	43 Band *	P ₂ O ₅	35 Band *	P ₂ O ₅	56 Band *		
Potassium	223 ppm	*****				K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Chloride						Cl		Cl		Cl			
Sulfur	0-6" 6-24"	*****				S	10 Band	S	0	S	0		
	120 +lb/ac 360 +lb/ac	*****				B		B		B			
Boron						Zn		Zn		Zn			
Zinc						Fe		Fe		Fe			
Iron						Mn		Mn		Mn			
Manganese						Cu		Cu		Cu			
Copper						Mg		Mg		Mg			
Magnesium						Lime		Lime		Lime			
Calcium						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Sodium						Buffer pH			% Ca	% Mg	% K	% Na	% H
Org.Matter						0-6" 7.7							
Carbonate(CCE)						6-24" 8.1							
Sol. Salts	1.91 mmho/cm 2.57 mmho/cm	*****											

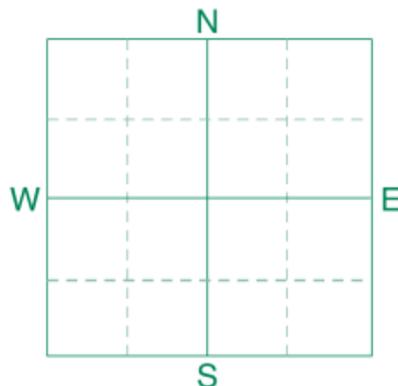
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SW10139**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **10** QTR **SW** ACRES **139**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143213** BOX # **0**
 LAB # **NW197944**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	24 lb/ac 27 lb/ac					50 BU	60 BU	160 BU					
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	51 lb/ac					Band		Band		Band			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	8 ppm	*****				N	124	N	111	N	141		
Phosphorus						P ₂ O ₅	43 Band *	P ₂ O ₅	35 Band *	P ₂ O ₅	56 Band *		
Potassium	251 ppm	*****				K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Chloride						Cl		Cl		Cl			
Sulfur	0-6" 6-24"	*****				S	10 Band	S	0	S	0		
	120 +lb/ac 360 +lb/ac	*****				B		B		B			
Boron						Zn		Zn		Zn			
Zinc						Fe		Fe		Fe			
Iron						Mn		Mn		Mn			
Manganese						Cu		Cu		Cu			
Copper						Mg		Mg		Mg			
Magnesium						Lime		Lime		Lime			
Calcium						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Sodium						Buffer pH			% Ca	% Mg	% K	% Na	% H
Org.Matter						0-6" 7.7							
Carbonate(CCE)						6-24" 8.1							
Sol. Salts	2.14 mmho/cm 2.48 mmho/cm	*****											

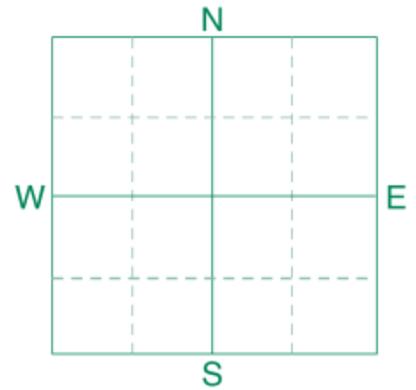
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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SOIL TEST REPORT

FIELD ID **SG1SW11149**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **11** QTR **SW** ACRES **149**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143216** BOX # **0**
 LAB # **NW197961**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High								
Nitrate	0-6" 6-24"	25 lb/ac 36 lb/ac	*****			Canola-bu	Wheat-Spring	Corn-Grain					
	0-24"	61 lb/ac				YIELD GOAL	YIELD GOAL	YIELD GOAL					
						50 BU	60 BU	160 BU					
						SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES					
						Band	Band	Band					
Phosphorus	Olsen	8 ppm	*****										
Potassium		200 ppm	*****										
Chloride													
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****										
Boron													
Zinc													
Iron													
Manganese													
Copper													
Magnesium													
Calcium													
Sodium													
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6" 6-24"	0.96 mmho/cm 1.06 mmho/cm	*****										
						Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
									% Ca	% Mg	% K	% Na	% H
						0-6" 7.2							
						6-24" 8.1							

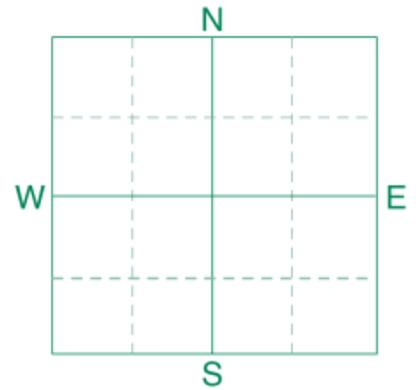
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG1SW1494**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **14** QTR **SW** ACRES **94**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2143219** BOX # **0**
 LAB # **NW197966**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	18 lb/ac 30 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	48 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	9 ppm	N	127	N	114	N	144	
Potassium		222 ppm	P ₂ O ₅	40 Band *	P ₂ O ₅	33 Band *	P ₂ O ₅	52 Band *	
Chloride			K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime	0	Lime	0	Lime	0	
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	0.63 mmho/cm 1.21 mmho/cm	0-6"	6.4					
			6-24"	7.7					

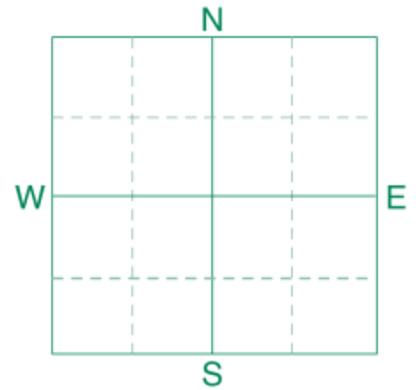
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG1SW20157**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **20** QTR **SW** ACRES **157**
 PREV. CROP



SUBMITTED FOR:
Southgate 1

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2143220** BOX # **0**
 LAB # **NW197963**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice					
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain					
Nitrate	0-6" 6-24"	***				YIELD GOAL			YIELD GOAL			YIELD GOAL					
						50 BU			60 BU			160 BU					
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES					
						Band			Band			Band					
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION				
Olsen Phosphorus	7 ppm	*****				N	158		N	145		N	175				
Potassium	174 ppm	*****				P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *	P ₂ O ₅	60	Band *			
Chloride						K ₂ O	1	Band *	K ₂ O	11	Band *	K ₂ O	17	Band *			
Sulfur	0-6" 6-24"	*****				Cl			Cl			Cl					
		*****				S	10	Band	S	0		S	0				
Boron						B			B			B					
Zinc						Zn			Zn			Zn					
Iron						Fe			Fe			Fe					
Manganese						Mn			Mn			Mn					
Copper						Cu			Cu			Cu					
Magnesium						Mg			Mg			Mg					
Calcium						Lime			Lime			Lime					
Sodium						Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Org.Matter																	
Carbonate(CCE)																	
Sol. Salts	0-6" 6-24"	*****				0-6" 7.8			6-24" 8.1								

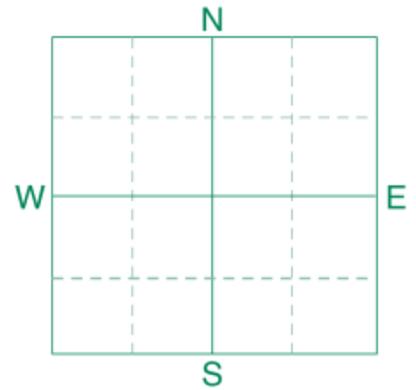
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NE01159**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **1** QTR **NE** ACRES **159**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA **OWO**

REF # **2146415** BOX # **0**
 LAB # **NW197965**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	35 lb/ac 72 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24"	107 lb/ac	50 BU		60 BU		160 BU			
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
			Band		Band		Band			
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	30 ppm		N	68	N	55	N	85		
Phosphorus			P ₂ O ₅	10	Band (Starter)*	P ₂ O ₅	15	Band (Starter)*		
Potassium	301 ppm		K ₂ O	0	Band (Starter)*	K ₂ O	10	Band (2x2)*		
Chloride			Cl			Cl				
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	S	10	Band	S	0			
Boron			B			B				
Zinc			Zn			Zn				
Iron			Fe			Fe				
Manganese			Mn			Mn				
Copper			Cu			Cu				
Magnesium			Mg			Mg				
Calcium			Lime			Lime				
Sodium										
Org.Matter										
Carbonate(CCE)										
Sol. Salts	0-6"	1.02 mmho/cm	Soil pH	7.4	Cation Exchange Capacity	% Base Saturation (Typical Range)				
	6-24"	1.7 mmho/cm	Buffer pH	8.1		% Ca	% Mg	% K	% Na	% H

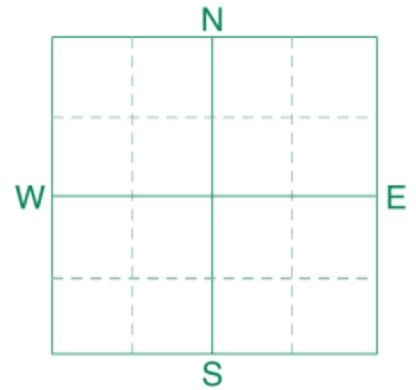
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NE02159**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **2** QTR **NE** ACRES **159**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146416** BOX # **0**
 LAB # **NW195016**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	33 lb/ac 24 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	57 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	10 ppm	N	118	N	105	N	135	
Potassium		199 ppm	P ₂ O ₅	38 Band *	P ₂ O ₅	31 Band *	P ₂ O ₅	48 Band *	
Chloride			K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	82 lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	0.55 mmho/cm 0.69 mmho/cm	0-6"	7.6	6-24"	8.1			

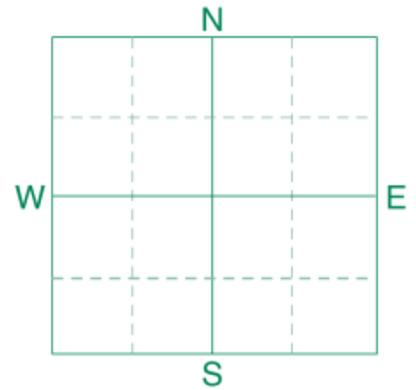
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NE05144**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **5** QTR **NE** ACRES **144**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146417** BOX # **0**
 LAB # **NW195020**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	17 lb/ac 18 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	35 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen	7 ppm	N	140	N	127	N	157	
Potassium		249 ppm	P ₂ O ₅	45 Band *	P ₂ O ₅	37 Band *	P ₂ O ₅	60 Band *	
Chloride			K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	
Sulfur	0-6" 6-24"	66 lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	0.54 mmho/cm 0.74 mmho/cm	0-6"	7.4					
			6-24"	8.2					

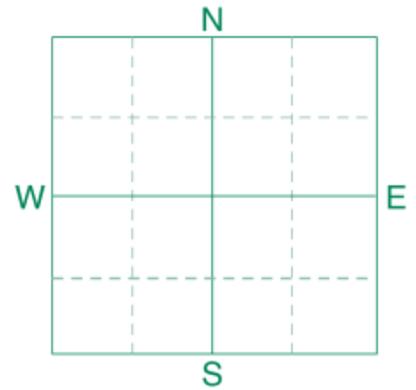
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NE14143**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **14** QTR **NE** ACRES **143**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146418** BOX # **0**
 LAB # **NW195019**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain		
Nitrate	0-6" 6-24"	****				YIELD GOAL			YIELD GOAL			YIELD GOAL		
						50 BU			60 BU			160 BU		
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
						Band			Band			Band		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Olsen Phosphorus	7 ppm	*****				N	154		N	141		N	171	
Potassium	243 ppm	*****				P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *	P ₂ O ₅	60	Band *
Chloride						K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *
Sulfur	0-6" 6-24"	*****				Cl			Cl			Cl		
Boron						S	10	Band	S	0		S	0	
Zinc						B			B			B		
Iron						Zn			Zn			Zn		
Manganese						Fe			Fe			Fe		
Copper						Mn			Mn			Mn		
Magnesium						Cu			Cu			Cu		
Calcium						Mg			Mg			Mg		
Sodium						Lime			Lime			Lime		
Org.Matter						Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	*****				0-6" 7.6								
		*****				6-24" 8.1								

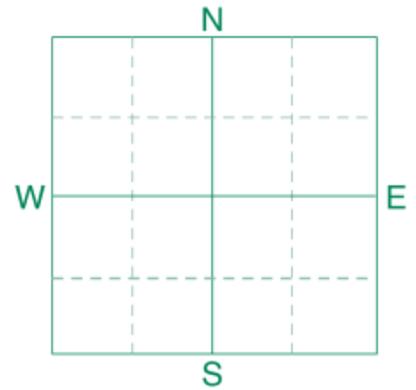
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NW01162**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **1** QTR **NW** ACRES **162**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146419** BOX # **0**
 LAB # **NW197968**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice								
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain								
Nitrate	0-6" 6-24"	23 lb/ac 33 lb/ac	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL							
	0-24"	56 lb/ac					50 BU			60 BU			160 BU							
							SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES							
							Band			Band			Band							
							LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION						
Phosphorus	Olsen	34 ppm	*****				N	119		N	106		N	136						
Potassium		358 ppm	*****				P ₂ O ₅	10	Band (Starter)*	P ₂ O ₅	15	Band (Starter)*	P ₂ O ₅	15	Band (2x2) *					
Chloride							K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *					
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****				Cl			Cl			Cl							
Boron							S	10	Band	S	0		S	0						
Zinc							B			B			B							
Iron							Zn			Zn			Zn							
Manganese							Fe			Fe			Fe							
Copper							Mn			Mn			Mn							
Magnesium							Cu			Cu			Cu							
Calcium							Mg			Mg			Mg							
Sodium							Lime			Lime			Lime							
Org.Matter							Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)				
Carbonate(CCE)																% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.92 mmho/cm 1.44 mmho/cm	*****				0-6" 7.5 6-24" 8.1													

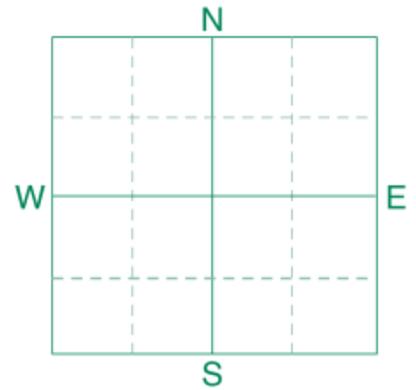
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2NW05140**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **5** QTR **NW** ACRES **140**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146420** BOX # **0**
 LAB # **NW195027**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain		
Nitrate	0-6" 6-24"	****				YIELD GOAL			YIELD GOAL			YIELD GOAL		
						50 BU			60 BU			160 BU		
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
						Band			Band			Band		
	Olsen	*****				LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Phosphorus						N	157		N	144		N	174	
Potassium	195 ppm	*****				P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *	P ₂ O ₅	60	Band *
Chloride						K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *
Sulfur	0-6" 6-24"	*****				Cl			Cl			Cl		
Boron						S	10	Band	S	0		S	0	
Zinc						B			B			B		
Iron						Zn			Zn			Zn		
Manganese						Fe			Fe			Fe		
Copper						Mn			Mn			Mn		
Magnesium						Cu			Cu			Cu		
Calcium						Mg			Mg			Mg		
Sodium						Lime			Lime			Lime		
Org.Matter						Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	*****				0-6"	7.8							
		*****				6-24"	8.3							

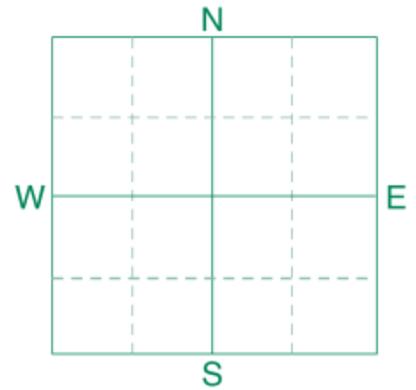
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
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Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2NW1296**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **12** QTR **NW** ACRES **96**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146421** BOX # **0**
 LAB # **NW195017**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain				
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL				
						50 BU			60 BU			160 BU				
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Band			Band			Band				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Olsen Phosphorus	5 ppm	*****				N	150		N	137		N	167			
Potassium	155 ppm	*****				P ₂ O ₅	50	Band *	P ₂ O ₅	41	Band *	P ₂ O ₅	69	Band *		
Chloride						K ₂ O	10	Band *	K ₂ O	19	Band *	K ₂ O	28	Band *		
Sulfur	0-6" 6-24"	*****				Cl			Cl			Cl				
						S	10	Band	S	0		S	0			
Boron						B			B			B				
Zinc						Zn			Zn			Zn				
Iron						Fe			Fe			Fe				
Manganese						Mn			Mn			Mn				
Copper						Cu			Cu			Cu				
Magnesium						Mg			Mg			Mg				
Calcium						Lime			Lime			Lime				
Sodium																
Org.Matter																
Carbonate(CCE)																
Sol. Salts	0-6"	*****				Soil pH	Buffer pH		Cation Exchange Capacity			% Base Saturation (Typical Range)				
	6-24"	*****				0-6"	7.5			% Ca	% Mg	% K	% Na	% H		
						6-24"	8.4									

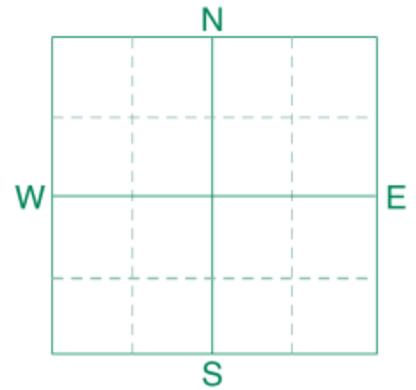
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SE01160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **1** QTR **SE** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146423** BOX # **0**
 LAB # **NW197964**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	35 lb/ac 42 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	77 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen	27 ppm		N	98	N	85	N	115	
Phosphorus			P ₂ O ₅	10	P ₂ O ₅	15	P ₂ O ₅	15	
Potassium	271 ppm			Band (Starter)*		Band (Starter)*		Band (2x2) *	
Chloride			K ₂ O	0	K ₂ O	10	K ₂ O	10	
				Band		Band (Starter)*		Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	1.22 mmho/cm 1.61 mmho/cm	0-6"	7.2					
			6-24"	8.1					

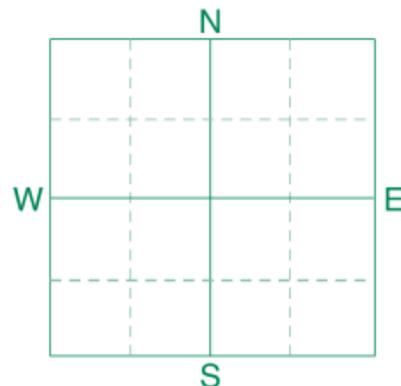
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2SE02160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **2** QTR **SE** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146424** BOX # **0**
 LAB # **NW195018**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	29 lb/ac 18 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	47 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen 16 ppm	*****	N 128		N 115		N 145		
Potassium	170 ppm	*****	P ₂ O ₅ 23	Band *	P ₂ O ₅ 19	Band *	P ₂ O ₅ 23	Band *	
Chloride			K ₂ O 3	Band *	K ₂ O 13	Band *	K ₂ O 20	Band *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S 10	Band	S 0		S 0		
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	1.07 mmho/cm 1.38 mmho/cm	0-6" 7.6						
			6-24" 8.3						

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

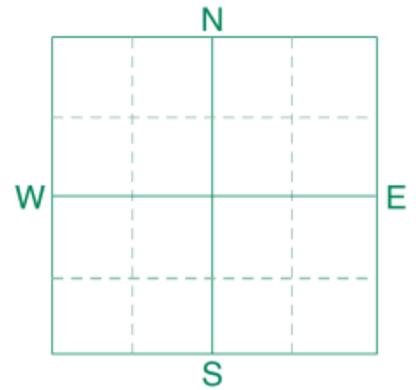
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SE05143**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **5** QTR **SE** ACRES **143**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146425** BOX # **0**
 LAB # **NW195025**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	***				YIELD GOAL		YIELD GOAL		YIELD GOAL			
			8 lb/ac 9 lb/ac			50 BU		60 BU		160 BU			
	0-24"		17 lb/ac			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Band		Band		Band			
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen 3 ppm	*****			N 158		N 145		N 175				
Potassium	200 ppm	*****			P ₂ O ₅ 55	Band *	P ₂ O ₅ 45	Band *	P ₂ O ₅ 77	Band *			
Chloride					K ₂ O 0		K ₂ O 10	Band (Starter)*	K ₂ O 10	Band (2x2) *			
Sulfur	0-6" 6-24"	*****			Cl		Cl		Cl				
	120 +lb/ac 360 +lb/ac	*****			S 10	Band	S 0		S 0				
Boron					B		B		B				
Zinc					Zn		Zn		Zn				
Iron					Fe		Fe		Fe				
Manganese					Mn		Mn		Mn				
Copper					Cu		Cu		Cu				
Magnesium					Mg		Mg		Mg				
Calcium					Lime		Lime		Lime				
Sodium													
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6"	*****			Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"		0.68 mmho/cm 0.82 mmho/cm						% Ca	% Mg	% K	% Na	% H
					0-6" 8.0								
					6-24" 8.4								

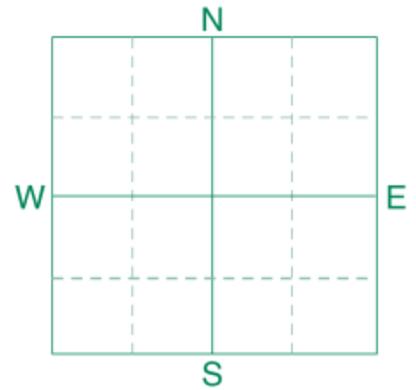
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2SE08160**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **8** QTR **SE** ACRES **160**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146426** BOX # **0**
 LAB # **NW195013**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain			
Nitrate	0-6" 6-24"	****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
			10 lb/ac 9 lb/ac			50 BU		60 BU		160 BU			
	0-24"		19 lb/ac			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Band		Band		Band			
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen 6 ppm	*****			N 156		N 143		N 173				
Potassium	197 ppm	*****			P ₂ O ₅ 48	Band *	P ₂ O ₅ 39	Band *	P ₂ O ₅ 65	Band *			
Chloride					K ₂ O 0		K ₂ O 10	Band (Starter)*	K ₂ O 10	Band (2x2) *			
Sulfur	0-6" 6-24"	*****			Cl		Cl		Cl				
	120 +lb/ac 360 +lb/ac	*****			S 10	Band	S 0		S 0				
Boron					B		B		B				
Zinc					Zn		Zn		Zn				
Iron					Fe		Fe		Fe				
Manganese					Mn		Mn		Mn				
Copper					Cu		Cu		Cu				
Magnesium					Mg		Mg		Mg				
Calcium					Lime		Lime		Lime				
Sodium													
Org.Matter													
Carbonate(CCE)													
Sol. Salts	0-6"	*****			Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"		1.27 mmho/cm 2.22 mmho/cm						% Ca	% Mg	% K	% Na	% H
					0-6" 7.6								
					6-24" 7.8								

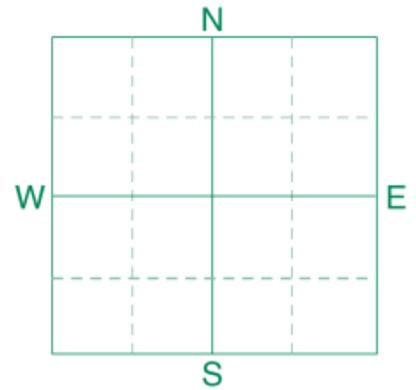
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SE12142**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **12** QTR **SE** ACRES **142**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146427** BOX # **0**
 LAB # **NW195023**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu		Wheat-Spring		Corn-Grain				
Nitrate	0-6" 6-24"	****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
			7 lb/ac 12 lb/ac	50 BU		60 BU		160 BU						
	0-24"		19 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES						
				Band		Band		Band						
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Olsen	7 ppm	*****				N	156	N	143	N	173			
Phosphorus						P ₂ O ₅	45	Band *	P ₂ O ₅	37	Band *			
Potassium	182 ppm	*****				K ₂ O	0		K ₂ O	10	Band (Starter)*			
Chloride						Cl			Cl					
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0				
Boron						B			B					
Zinc						Zn			Zn					
Iron						Fe			Fe					
Manganese						Mn			Mn					
Copper						Cu			Cu					
Magnesium						Mg			Mg					
Calcium						Lime			Lime					
Sodium														
Org.Matter														
Carbonate(CCE)														
Sol. Salts	0-6"	*****				Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"		0.99 mmho/cm 1.15 mmho/cm				0-6" 7.9			% Ca	% Mg	% K	% Na	% H
						6-24" 8.4								

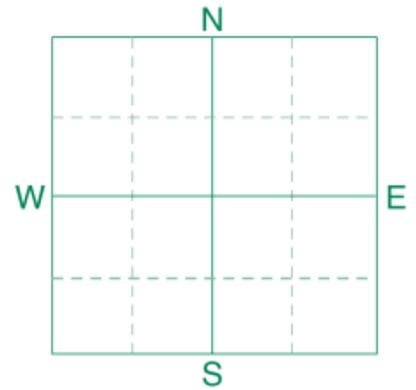
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2SE13122**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **13** QTR **SE** ACRES **122**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146429** BOX # **0**
 LAB # **NW195022**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	15 lb/ac 69 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	84 lb/ac	50 BU		60 BU		160 BU		
		*****	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen Phosphorus	6 ppm	*****	N	91	N	78	N	108	
Potassium	169 ppm	*****	P ₂ O ₅	48 Band *	P ₂ O ₅	39 Band *	P ₂ O ₅	65 Band *	
Chloride			K ₂ O	3 Band *	K ₂ O	13 Band *	K ₂ O	20 Band *	
Sulfur	0-6" 6-24"	120 +lb/ac 156 lb/ac	Cl		Cl		Cl		
Boron			S	10 Band	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	0.49 mmho/cm 0.33 mmho/cm	0-6"	7.7	6-24"	8.2			

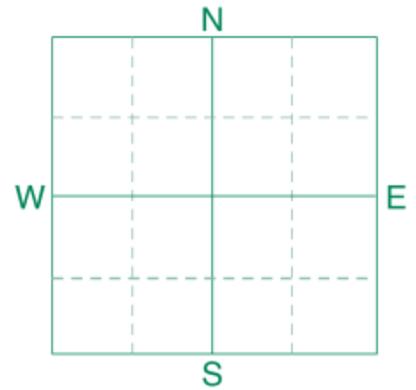
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SE14137**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **14** QTR **SE** ACRES **137**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146430** BOX # **0**
 LAB # **NW195024**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow Low Med High								
Nitrate	0-6" 6-24"	28 lb/ac 72 lb/ac			Canola-bu	Wheat-Spring		Corn-Grain		
					YIELD GOAL	YIELD GOAL		YIELD GOAL		
	0-24"	100 lb/ac			50 BU	60 BU		160 BU		
					SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
					Band		Band			
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen	5 ppm	*****	N	75	N	62	N	92		
Phosphorus			P ₂ O ₅	50 Band *	P ₂ O ₅	41 Band *	P ₂ O ₅	69 Band *		
Potassium	256 ppm	*****	K ₂ O	0	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *		
Chloride			Cl		Cl		Cl			
Sulfur	0-6" 6-24"	50 lb/ac 360 +lb/ac	S	10 Band	S	0	S	0		
Boron			B		B		B			
Zinc			Zn		Zn		Zn			
Iron			Fe		Fe		Fe			
Manganese			Mn		Mn		Mn			
Copper			Cu		Cu		Cu			
Magnesium			Mg		Mg		Mg			
Calcium			Lime		Lime		Lime			
Sodium										
Org.Matter										
Carbonate(CCE)										
Sol. Salts	0-6"	0.51 mmho/cm			Soil pH	Buffer pH	% Base Saturation (Typical Range)			
	6-24"	2.12 mmho/cm					% Ca	% Mg	% K	% Na
			0-6"	7.7						
			6-24"	8.0						

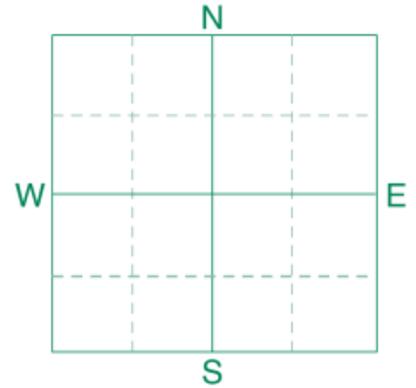
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SW01157**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **1** QTR **SW** ACRES **157**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146432** BOX # **0**
 LAB # **NW197958**

Date Sampled

Date Received **11/10/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow Low Med High	Canola-bu		Wheat-Spring		Corn-Grain		
Nitrate	0-6" 6-24"	25 lb/ac 33 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	58 lb/ac	50 BU		60 BU		160 BU		
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
			Band		Band		Band		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen	28 ppm		N	117	N	104	N	134	
Phosphorus			P ₂ O ₅	10	P ₂ O ₅	15	P ₂ O ₅	15	
Potassium	282 ppm			Band (Starter)*		Band (Starter)*		Band (2x2) *	
Chloride			K ₂ O	0	K ₂ O	10	K ₂ O	10	
				Band		Band (Starter)*		Band (2x2) *	
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	Cl		Cl		Cl		
Boron			S	10	S	0	S	0	
Zinc			B		B		B		
Iron			Zn		Zn		Zn		
Manganese			Fe		Fe		Fe		
Copper			Mn		Mn		Mn		
Magnesium			Cu		Cu		Cu		
Calcium			Mg		Mg		Mg		
Sodium			Lime		Lime		Lime		
Org.Matter			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)			Buffer pH				% Ca	% Mg	% K
							% Na	% H	
Sol. Salts	0-6" 6-24"	1.31 mmho/cm 1.66 mmho/cm	0-6"	7.4	6-24"	7.8			

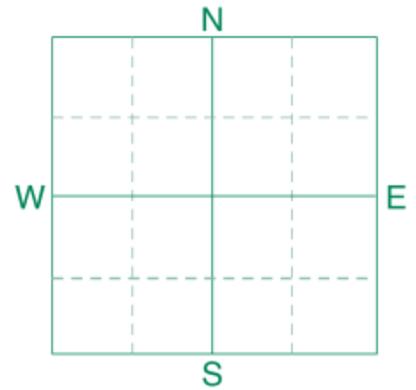
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SW05118**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **5** QTR **SW** ACRES **118**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146433** BOX # **0**
 LAB # **NW195021**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice								
		VLow	Low	Med	High													
Nitrate	0-6" 6-24"	8 lb/ac 6 lb/ac	***					Canola-bu		Wheat-Spring		Corn-Grain						
	0-24"	14 lb/ac						YIELD GOAL		YIELD GOAL		YIELD GOAL						
								50 BU		60 BU		160 BU						
								SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES						
								Band		Band		Band						
								LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION					
Phosphorus	Olsen	5 ppm	*****					N	161	N	148	N	178					
Potassium		189 ppm	*****					P ₂ O ₅	50	Band *	P ₂ O ₅	41	Band *	P ₂ O ₅	69	Band *		
Chloride								K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****					Cl		Cl		Cl						
Boron								S	10	Band	S	0		S	0			
Zinc								B			B			B				
Iron								Zn			Zn			Zn				
Manganese								Fe			Fe			Fe				
Copper								Mn			Mn			Mn				
Magnesium								Cu			Cu			Cu				
Calcium								Mg			Mg			Mg				
Sodium								Lime			Lime			Lime				
Org.Matter								Soil pH		Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)														% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.64 mmho/cm 1.24 mmho/cm	*****					0-6"	7.9									
			*****					6-24"	8.2									

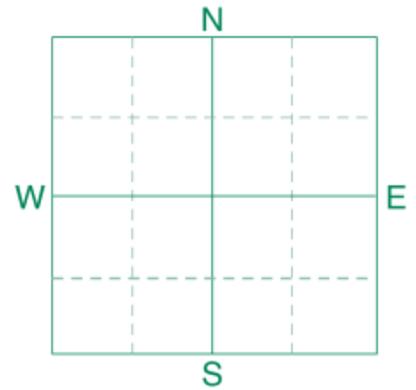
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2SW09152**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **9** QTR **SW** ACRES **152**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146434** BOX # **0**
 LAB # **NW195014**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6" 6-24"	19 lb/ac 15 lb/ac	*****			Canola-bu		Wheat-Spring		Corn-Grain				
	0-24"	34 lb/ac				YIELD GOAL		YIELD GOAL		YIELD GOAL				
						50 BU		60 BU		160 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Band		Band		Band				
Olsen	4 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus					N	141		N	128	N	158			
Potassium	214 ppm	*****			P ₂ O ₅	53	Band *	P ₂ O ₅	43	P ₂ O ₅	73	Band *		
Chloride					K ₂ O	0		K ₂ O	10	K ₂ O	10	Band (2x2) *		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****		Cl			Cl		Cl				
Boron					S	10	Band	S	0	S	0			
Zinc					B			B		B				
Iron					Zn			Zn		Zn				
Manganese					Fe			Fe		Fe				
Copper					Mn			Mn		Mn				
Magnesium					Cu			Cu		Cu				
Calcium					Mg			Mg		Mg				
Sodium					Lime			Lime		Lime				
Org.Matter					Soil pH		Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)										% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	2.46 mmho/cm 2.4 mmho/cm	*****		0-6"	7.9								
			*****		6-24"	8.0								

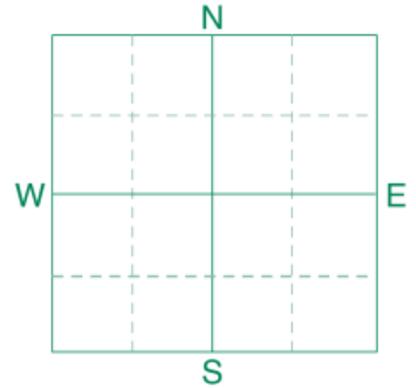
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **SG2SW13151**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **13** QTR **SW** ACRES **151**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB ROA 0W0

REF # **2146435** BOX # **0**
 LAB # **NW195028**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain				
Nitrate	0-6" 6-24"	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL				
						50 BU			60 BU			160 BU				
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Band			Band			Band				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Olsen	6 ppm	*****				N	126		N	113		N	143			
Phosphorus						P ₂ O ₅	48	Band *	P ₂ O ₅	39	Band *	P ₂ O ₅	65	Band *		
Potassium	212 ppm	*****				K ₂ O	0		K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *		
Chloride						Cl			Cl			Cl				
Sulfur	0-6" 6-24"	*****				S	10	Band	S	0		S	0			
Boron						B			B			B				
Zinc						Zn			Zn			Zn				
Iron						Fe			Fe			Fe				
Manganese						Mn			Mn			Mn				
Copper						Cu			Cu			Cu				
Magnesium						Mg			Mg			Mg				
Calcium						Lime			Lime			Lime				
Sodium						Soil pH			% Base Saturation (Typical Range)							
Org.Matter						Buffer pH	Cation Exchange Capacity		% Ca	% Mg	% K	% Na	% H			
Carbonate(CCE)						0-6"	7.5									
Sol. Salts	0-6" 6-24"	*****				6-24"	8.2									

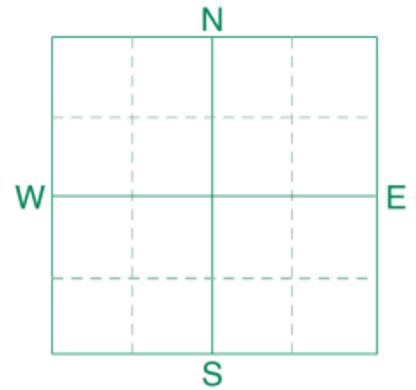
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **SG2SW16158**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **1** RANGE **16 W**
 SECTION **16** QTR **SW** ACRES **158**
 PREV. CROP



SUBMITTED FOR:
Southgate 2

SUBMITTED BY: **HY4851**
HYLIFE LTD.
5 FABAS STREET
BOX 100
LA BROQUERIE, MB **ROA 0W0**

REF # **2146437** BOX # **0**
 LAB # **NW195015**

Date Sampled

Date Received **11/08/2017**

Date Reported **11/20/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice					
		VLow	Low	Med	High	Canola-bu			Wheat-Spring			Corn-Grain					
Nitrate	0-6" 6-24"	13 lb/ac 12 lb/ac	*****														
	0-24"	25 lb/ac				YIELD GOAL	YIELD GOAL	YIELD GOAL	50 BU	60 BU	160 BU	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES			
						Band	Band	Band				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
						N	150		N	137		N	167		N	167	
						P ₂ O ₅	53	Band *	P ₂ O ₅	43	Band *	P ₂ O ₅	73	Band *	P ₂ O ₅	73	Band *
Olsen Phosphorus	4 ppm	*****				K ₂ O	11	Band *	K ₂ O	19	Band *	K ₂ O	28	Band *			
Potassium	154 ppm	*****				Cl			Cl			Cl					
Chloride						S	10	Band	S	0		S	0				
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			B			B			B					
Boron						Zn			Zn			Zn					
Zinc						Fe			Fe			Fe					
Iron						Mn			Mn			Mn					
Manganese						Cu			Cu			Cu					
Copper						Mg			Mg			Mg					
Magnesium						Lime			Lime			Lime					
Calcium						Soil pH			Buffer pH			Cation Exchange Capacity			% Base Saturation (Typical Range)		
Sodium						0-6"	7.9										
Org.Matter						6-24"	8.4										
Carbonate(CCE)																	
Sol. Salts	0-6" 6-24"	1.27 mmho/cm 2.61 mmho/cm	*****														

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many 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 = 38 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.