

SITE ASSESSMENT

For Large Livestock Operation Proposals (300 Animal Units or more)

1.0 Purpose

The set up, or expansion, of a livestock operation that has 300 Animal Units or more is subject to [Part 7 of The Planning Act](#). This includes consideration as a conditional use by the municipal council or planning district board. It also includes a review by the Technical Review Committee (TRC) appointed by the Minister of Local Government. The [Technical Review Committee Regulation](#) requires a site assessment to help the committee do its review and allow people who will be affected by the livestock operation to comment on the proposal.

2.0 Assistance

For assistance in completing the Site Assessment Form please refer to the following.

For links to resources, click on the [highlighted underlined items](#).

For additional information on a particular item, please click on the (?) "Learn More" icon.

For definitions, click on the [Glossary of Terms](#).

For help with mapping, contact your [Community and Regional Planning Regional Office](#).

For additional help, contact the [Technical Review Coordination Unit](#).

3.0 Description of Livestock Operation

Operation legal name, if other than the owner's name:

Canada Sheep & Lamb Farms Ltd

Operation location (project site):  E½ NW21-5-6E

Rural Municipality (RM) of Hanover

Legal description: section, township, range or river lot(s)

E½ NW21-5-6E

Manitoba Premises Identification Number: MB 1002935

Municipal tax roll number(s): 0258720.000

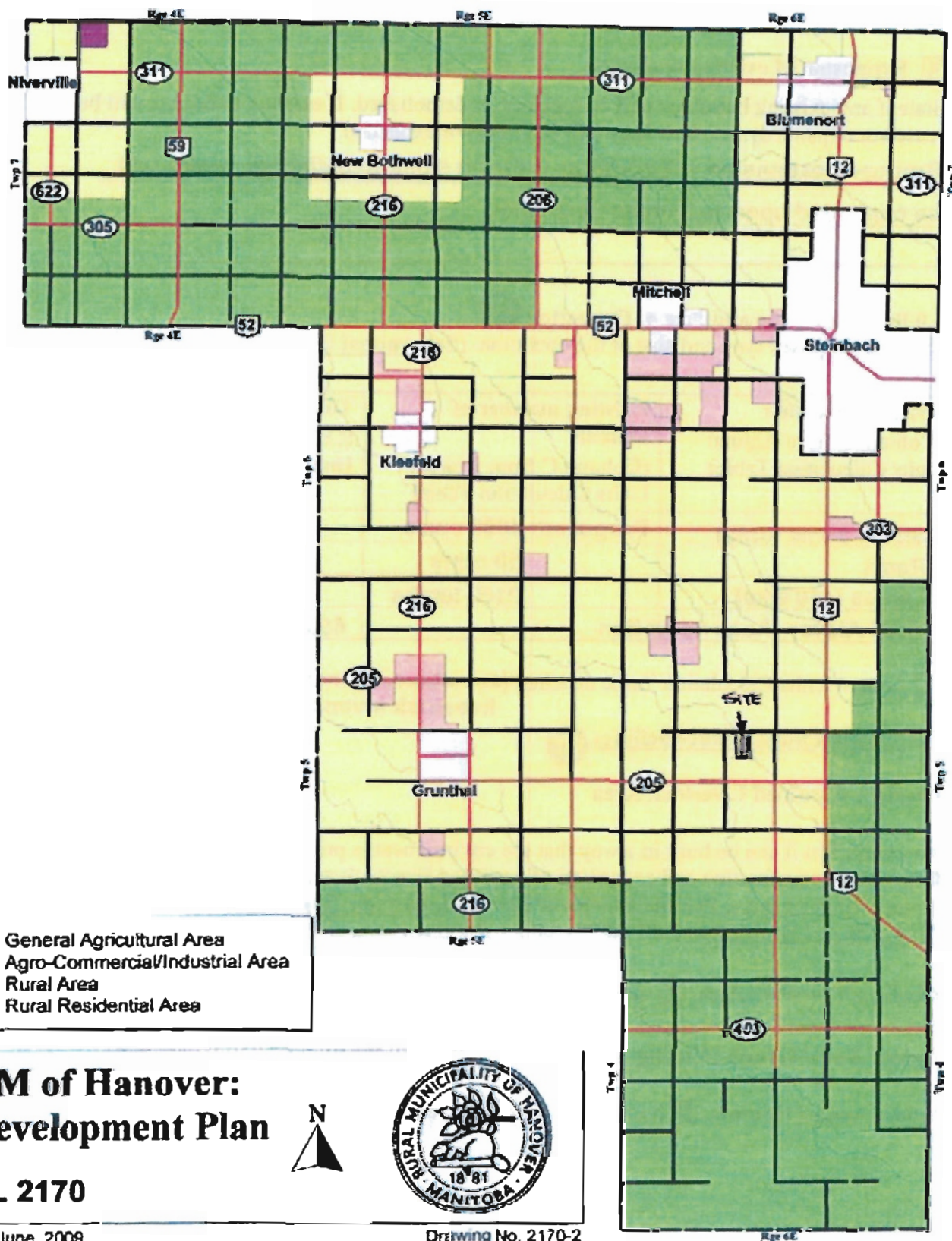
Show the location of the operation (project site) on a location map. (See [Location Map](#) for example).

☒ Location Map attached

Canada Sheep + Lamb Farms Ltd - Location Map.

Rural Land Use

Map 1



4.0 Nature of Project ?

☐ New operation

☒ Expansion of existing operation

State if any existing buildings will be replaced or demolished. If existing buildings will be reused or expanded, state how they will be reused or expanded.

Proposed expansion will continue utilizing existing buildings, which will be expanded upon to increase capacity.

5.0 Proposed Type and Size of Operation ?

State the proposed type and size of the operation. (See [Animal Units Calculation Table](#).)

Type of operation (Column B from Animal Units Calculation Table)	Existing number of animals (Column C from Animal Units Calculation Table)	Total Animal Units (Column F from Animal Units Calculation Table)
Sheep Ewes (only)	Proposed: 4000 ewes	
Rams	50 rams	
Lambs (<10 wks)	2150 lambs	
Total AU for sheep operation		658 animal units (total)

☒ Animal Units Calculation Table attached (see alternate method used to include all livestock inventories)

6.0 [Animal Confinement Facilities](#) ?

Outdoor Confined Livestock Area

To ensure that it can be built in a way that the environment is protected, a permit is required for construction and expansion of [confined livestock areas](#) for operations with 300 Animal Units or more. Permits are required by the [Livestock Manure and Mortalities Management Regulation](#) (MR 42/98), under *The Environment Act*.

Confined Livestock Area: ☒ outdoor seasonal feeding area ☐ feedlot ☐ not applicable

Indoor Barn/Animal Housing

Indoor Animal Housing: ☒ barn ☐ other (describe) _____ ☐ not applicable

Sheep/Operation Type	Storage Type	Volatilization	Animal Numbers	Weight In lb	Weight Out lb	Ave Weight lb	Days on Feed	Cycles per Year	N Excreted Per Sheep Place kg/yr	N Excreted Per Flock kg/yr	Adjusted for Loss N kg/yr	N Excreted per Flock adjusted for Loss lb/flock/yr	P205 Excreted Per Flock lb/flock/yr
Ewes	Field Storage	40%	4000	120	170	145	365	1	10.80	43204	25822	57159	34084
Replacement Ewes	Field Storage	40%	0	45	80	63	210	1	2.68	0	0	0	0
Rams	Field Storage	40%	55	100	200	150	365	1	11.17	615	369	813	485
Lambs	Field Storage	40%	2150	8	45	27	365	1	1.97	4244	2546	5615	3348
Ewes, plus associated stock	Field Storage	40%	0	na	na	na	na	na	13.09	0	0	0	0
Feeder	Field Storage	40%	0	45	100	73	365	1	5.40	0	0	0	0

*Total N Excreted/yr = 48063 kg/yr

**Lambs are generally weaned at 50 days, and
and finished on feed to market within about 150 days.

Animal Units Calculation Table

A	B	C	D	E	F	G
Animal Type	Type of Operation	Existing Number of Animals	Proposed Additional Number of Animals	Animal Units per Head	Total Animal Units	Annual Confinement Period (Days)
Dairy ¹	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 weaning (up to 11 lbs)			0.25	-	
	Sows - farrow to nursery (51 lbs)			0.313	-	
	Boars (artificial insemination units)			0.2	-	
	Weanlings, Nursery (11-51 lbs)			0.033	-	
	Growers / Finishers (51-249 lbs)			0.143	-	
Chickens	Broilers			0.005	-	
	Roosters			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		4,000	0.2	800.00	
	Feeder lambs			0.063	-	
Other Livestock	Type:				-	
	Type:				-	
				Total AUs	800.00	

Footnotes:

¹ 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 your Manitoba Agriculture, Food and Rural Initiatives GO office to determine the animal units per head.
www.gov.mb.ca/agriculture/contact/agoffices.html


Alternate estimate of Animal Units (AU) for the livestock inventories:

1 AU = 73 kg N produced/year

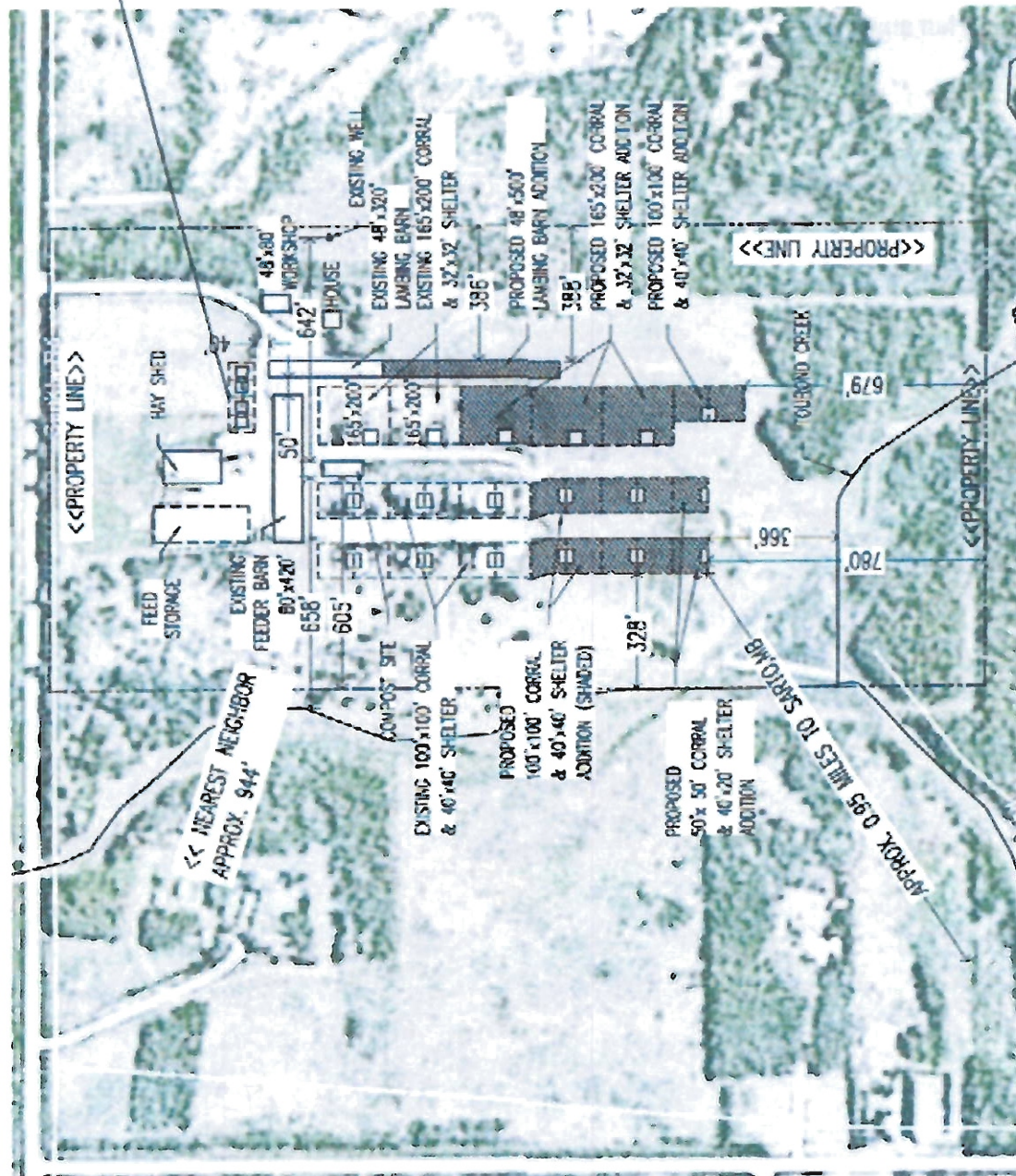
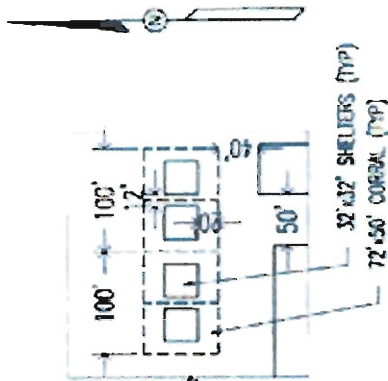
Estimated N production (cf farm excretion worksheet attached): 48 063 kg/yr

AU = 48 063 ÷ 73 = 658 AU

A permit under the [Livestock Manure and Mortalities Management Regulation](#) is not required for an indoor housing area or barn unless there is a manure storage facility within the building (an under barn storage capable of storing manure for 30 days or more).

Show all [existing, proposed buildings and additions to existing buildings](#) on the project site plan. See [Project Site Plan example](#) and the Project [Site Plan Guide](#) for help creating your site plan. 

☒ Project Site Plan attached



PROJECT NAME	CANADA SHEEP & LAMB - SARTO	SHEET NO.	N/A
SHEET TITLE	SITE PLAN	OWNER OF	P. FERRER/R. FLORES SOUTH-MAN ENGINEERING
DATE DRAWN	FEBRUARY 2014	DRAWING SCALE	N.T.S.
SHEET NUMBER	S-P1	SHEET NAME	S-P1

South-Man Engineering

1401 18TH AVE. SUITE 100
WINNIPEG, MANITOBA
R3J 0G0

TEL: (204) 781-1111
FAX: (204) 781-1112
WWW.SOUTH-MAN.COM

7.0 Environmental Farm Planning

Environmental farm planning is a voluntary, confidential self-assessment process designed to help farm managers identify the environmental strengths and weaknesses of their operations.

Do you have an Environmental Farm Plan ☐ yes ☒ no

If so, is it current (completed within past 5 years) ☐ yes ☐ no

8.0 Water

Project Sites Unsuitable for Development

To protect water quality, the Nutrient Management Regulation (MR 62/2008), under *The Water Protection Act*, prohibits the set up or expansion of nutrient generating facilities in Nutrient Management Zone 4 (Agriculture Capability Class 6, 7 and unimproved organic soils) and Nutrient Buffer Zones. Nutrient generating facilities include barns, confined livestock areas and manure storage facilities.

Nutrient Buffer Zone as defined in section 3(3) of the regulation includes areas of land along water bodies such as rivers, lakes, streams and drains.

The proposed indoor housing area, barn, confined livestock area and/or manure storage facility:

will ☐
will not ☒

be located within Nutrient Management Zone 4 (Class 6, 7 and unimproved organic soils) or any Nutrient Buffer Zone.

Determine the agriculture capability class(es) of the project site, and its limitations. This information is available from Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at 204-945-3869 in Winnipeg. Alternatively, operations with GIS mapping software can access information through Manitoba Land Initiative (MLI) website. In addition, information from MLI can also be viewed on Google Earth. Both the download for Google Earth and the registration for MLI are free. Click [here](#) for instructions under the MLI website.

Water Source ?

To be sustainable, a livestock operation must have access to a sufficient quantity and quality of water for livestock.

Water source for operation:

- | | |
|---|---|
| <input type="checkbox"/> pipeline (public) | <input type="checkbox"/> water co-operative |
| <input type="checkbox"/> proposed well | <input checked="" type="checkbox"/> existing well |
| <input type="checkbox"/> river | <input type="checkbox"/> lake |
| <input type="checkbox"/> dugout (dimensions : ____ x ____ x ____) | |

If using an existing well, provide a copy of the water well log and logs for other wells on the property. Logs can be obtained from Manitoba Conservation and Water Stewardship by calling (204) 945-7418 in Winnipeg; 1-800-214-6497 toll free. ?

LOCATION: NW21-5-6E

Well_PID: 29502

Owner: P SMITH

Driller: Friesen Drillers Ltd.

Well Name:

Well Use: PRODUCTION

Water Use: Domestic,Livestock

UTMX: 664655.888

UTMY: 5475552.53

Accuracy XY: UNKNOWN

UTM2:

Accuracy Z:

Date Completed: 1977 Apr 11

WELL LOG

From To Log

(ft.) (ft.)

0 10.0 SAND

10.0 32.0 CLAY- BLUE

32.0 116.9 TILL- FIRM, BLUE

116.9 200.9 SILT- SMALL LAYERS OF CLAY

200.9 208.9 TILL- BOULDERY

208.9 259.8 LIMESTONE

WELL CONSTRUCTION

From To Casing Inside Outside Slot Type Material

(ft.) (ft.) Type Dia.(in) Dia.(in) Size(in)

0 209.9 casing 4.25 INSERT BLACK IRON

209.9 259.8 open hole

Top of Casing: ft. below ground

PUMPING TEST

Date:

Pumping Rate: 15.0 Imp. gallons/minute

Water level before pumping: 22.0 ft. below ground

Pumping level at end of test: 25.0 ft. below ground

Test duration: hours, minutes

Water temperature: ?? degrees F

Source Water Analysis Reports

Annual livestock source water monitoring analysis reports must be submitted to Manitoba Conservation and Water Stewardship for any operations of 300 Animal Units or more.

If an existing livestock operation of 300 Animal Units or more, have you submitted an annual source water monitoring report for the current calendar year? ☐ yes ☒ no

Will livestock have direct access to surface water (not including dugouts)? ☐ yes ☐ no

If yes, identify:

Name of the surface water feature: _____

List any steps that will be taken to prevent direct access of livestock to the water body.

Water Requirements

Protecting the interests of domestic users and the environment, in addition to existing licensees, is the intended purpose of the water rights licensing scheme.

In order to protect the sustainability of water sources, all operations using more than 25,000 litres (5,499 imperial gallons) per day must possess a Water Rights Licence required by the Water Rights Regulation (MR 126/87) under *The Water Rights Act*.

For more information on the Water Rights Licensing process, contact the Water Use Licensing Section at (204) 945-3983 in Winnipeg; 1-800-214-6497 toll free.

Water Use ?

To calculate the total water use, go to the [Water Requirement Calculation Table](#).

Maximum daily use: 15 540 ☒ imperial gallons or ☐ litres

Maximum annual use: 5 672 100 ☐ acre-feet or ☐ cubic decameters

☒ Water Requirement Calculation Table attached

Groundwater (Contamination Risk Protection)

Improper storage and handling of manure or mortalities increases the risk of contaminating groundwater. Beneficial management practices (BMP), mitigation measures and requirements for the permit process reduce this risk. Soil testing, manure management planning and proper engineering, along with construction and management of manure storage structures reduce the risk of contaminating groundwater.

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 cow		10	12	-
Milking cow		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)		6.5		-
Dry Sow/Boar		4		-
Feeder		3		-
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	50	2		100
Ewes/Does	4,000	3		12,000
Lambs/Kids (90 lb.)	2150*	1.6		3440
TOTAL (IG/day)				12,100

*Worksheet does not allow to enter # lambs

15540 lgal

Other consumption values:

Normal household consumption:
40-55 IG/day per person or
(180-250 l/day/person)

Hydrant flow:
10 Imperial GPM (45 l/min)

Unit Conversions		
Total per day	Total per year	Unit
12,100	4,416,500	IG
55,007	20,077,400	litres
0.055	20	cubic decametres (dam ³)

Conversion Factor: 1 IGPM = 4.546 l/m

Correct values: 15,540 lgal/day — 5,672,100 lgal/yr

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.

Enter this number on page 7 of Application Form.

Enter this number on page 7 of Application Form.

Check off the mitigation measures used for the existing components of the operation that may pose a risk of contamination. Also check off any measures that may be used with the proposed components for this expansion, if applicable:

	Existing	Proposed
Manure is stored in a storage facility built by permit or registered by Manitoba Conservation and Water Stewardship	<input type="checkbox"/>	<input type="checkbox"/> n/a
Storage includes leachate collection	<input type="checkbox"/>	<input type="checkbox"/> n/a
Earthen storage has between 400 and 500 days storage	<input type="checkbox"/>	<input type="checkbox"/> n/a
Steel/concrete tank has between 250 and 500 days storage	<input type="checkbox"/>	<input type="checkbox"/> n/a
Manure storage facility meets required setbacks	<input type="checkbox"/>	<input type="checkbox"/> n/a
Field storage (solid manure) locations are changed annually	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Field storage meets required setbacks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All application fields are soil tested annually for nitrate-N and Olsen phosphorus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All manure is applied according to a manure management plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Licensed commercial manure applicator is used to apply manure	<input type="checkbox"/>	<input type="checkbox"/> n/a
Abandoned wells have been properly sealed	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other:

Manure and straw pack material will be field stored throughout the year and spread in the fall.

Building in Flood Areas

The Livestock Manure and Mortalities Management Regulation prohibits an operator from putting a manure storage facility within the boundaries of the 100-year flood plain elevation. Manure storage facilities that are constructed with protection for a flood-water level at least 0.6 meters higher than the 100-year flood water level are exempt.

The Designated Flood Area Regulation under *The Water Resources Administration Act* requires a Designated Flood Area Permit before a proposed structure (such as a barn) can be built within a Designated Flood Area.

The flood protection level for structures located within a Designated Flood Area is the site specific design flood level plus freeboard, as provided by the Hydraulic Forecasting Branch of Manitoba Infrastructure and Transportation. Contact the Hydrologic Forecasting Branch at (204) 945-2121 in Winnipeg; 1-800-214-6497 toll free.

The proposed site:

is ☐ is not ☒

located in a Designated Flood Area: Red River Valley Designated Flood Area or Lower Red River Designated Flood Area

Note: At the time a permit is issued, verification is needed to ensure any proposed structure(s) are located within the 100-year flood plain elevation; or at an elevation set by Manitoba Infrastructure and Transportation.

Watershed Management Planning

Integrated watershed management planning is a co-operative effort by local residents, stakeholders and governments to create a long term plan to manage water and land-based activities for watersheds.

What are the names of the watershed and sub-watershed where the livestock operation and the fields identified for manure application are located?

Name of watershed(s): Seine River

Name of sub-watershed(s): Tourond Creek

Name of Integrated Watershed Management Plan for the proposed project site, if applicable: Seine River IWMP

For more on Integrated Watershed Management Planning, call Watershed Planning and Programs at (204) 945-7408 in Winnipeg; 1-800-214-6497 toll free.

9.0 Manure

The Livestock Manure and Mortalities Management Regulation sets requirements for the use, management and storage of livestock manure in agricultural operations, to ensure it is handled in an environmentally sound manner. For more information on this, call Manitoba Conservation and Water Stewardship at (204) 619-2230 in Winnipeg.

Improper storage, handling and/or land application of manure can contaminate water and/or cause unacceptable odours for neighbours. The following is used to assess the manure management system.

Manure Type

The type of manure generated and used by the operation influences storage, handling and land application options available.

What type(s) of manure will be generated?

☒ solid

☐ semi-solid

☐ liquid

Manure Volume or Weight

Manure production can be estimated using the Manure Production Calculator Table. The sizing of the manure storage is the responsibility of the operator and must be constructed in accordance with the Livestock Manure and Mortalities Management Regulation. Design and construction of a manure storage facility is dependent on the type of structure: earthen manure storage facilities must have between 400 and 500 days capacity, a steel or concrete storage tank must have between 250 and 500 days capacity. This ensures the facility has sufficient capacity eliminating the need for winter application.

What will be the total volume or weight of manure generated annually by the livestock operation? (See Manure Production Calculator Table.)

liquid volume: _____ solid weight: **3 800 tons/yr**

n/a ☐ Manure Production Calculator Table attached
(no provision for sheep operations in worksheet)

(estimated from historical manure
management with current inventories)

Manure Storage Type and Capacity

The type of storage system used will affect the capacity requirements for the manure storage facility or field storage area.

What type of **manure storage facility** will be used by the operation?

- ☐ under-barn concrete ☐ **earthen manure storage** ☐ concrete tank(s)
☐ steel tank(s) ☒ **field storage** ☐ **molehill**

Provide the dimensions of the existing and/or proposed manure storage facilities, if applicable. (See **Existing and Proposed Manure Storage Facility Dimensions Table**.)

☐ Existing and Proposed Manure Storage Facility Dimensions Table attached **n/a vs. field storage**

Odour Control Measures (project site)

Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.

What odour control measures are you planning to use?

Manure storage cover: ☐ yes ☐ no

(n/a to confined livestock areas
and field stored solid manure)

Type of cover: _____

Shelterbelt planting: ☐ yes ☐ no ☒ existing shelterbelt

Other measures (specify): Bushes of mature trees separate the operation from the closest neighbours.

Manure Treatment

Under *The Environment Act*, the director must not issue a permit for the modification, expansion, or construction of a manure storage facility accommodating an increase in the number of animal units for pigs, unless the manure is treated using anaerobic digestion or another environmentally sound treatment that is similar to or better than anaerobic digestion, according to Manitoba Conservation and Water Stewardship.

Does your proposal include anaerobic digestion or another environmentally sound treatment for manure?

☐ yes ☐ no ☒ not applicable

Animal Type (A)	Animal Sub-type (B)	References (C)	Daily Manure Production			Production Period 1 (Days) (D)	Number of Animals 2 (Capacity) (H)	Total Manure Volume (ft ³) (F×G×H)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)
			Manure Type (D)	Default Manure Production (ft ³ /animal/day) (E)	Operation Manure Production ¹ (ft ³ /animal/day) (F)				
Dairy (milk cows and associated livestock)	Free Stall	Table 6, pg 59, FPGs for Dairy 1995	Semi-Solid ³	3.5					0.0
			Solid ⁴	3.4					0.0
			Liquid ⁵	3.6					0.0
	Tie Stall		Semi-Solid ³	3.6					0.0
			Solid ⁴	3.6					0.0
Cows	Loose Housing	pg 117, FPGs for Hogs 1998	Solid ⁴	3.0					0.0
	Milking Parlor Manure and Washwater		Liquid	0.5					0.0
	Steel cows including associated livestock		Solid	1.2					0.0
	Backgrounder (200 days)		Solid	0.73					0.0
	Summer pasture / replacement heifers		Solid	0.85					0.0
Pigs	Feeder cattle	MAFRI website, FPGs for Pigs 2007	Solid	1.1					0.0
	Sows - farrow (2 finish (234 - 254 lbs)		Liquid	2.3					0.0
	Sows - farrow to wean (up to 11 lbs)		Liquid	0.6					0.0
	Sows - farrow to nursery (21 lbs)		Liquid	1					0.0
	Weanlings, Nursery (11 - 51 lbs)		Liquid	0.1					0.0
Animals Type	Type of Operation		Yearly Manure Production			Production Period 2 (Days)	Number of Birds ³ (Capacity)	Total Manure Volume (ft ³) (F385×G×H)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)
			Default Manure Production (ft ³ /yearbird space)	Operation Manure Production ¹ (ft ³ /yearbird space)					
Chickens		Table 3, pg 85, FPGs for Poultry 2000		1.23					0.0
				2.3					0.0
				0.99					0.0
				1.16					0.0
				2.33					0.0
Turkeys		Table 3, pg 85, FPGs for Poultry 2000		1.08					0.0
				0.71					0.0
				0.75					0.0
				2.83					0.0
				5.58					0.0

Siting of a manure storage facility in accordance with all requirements of the Livestock Manure and Mortalities Management Regulation (M.R. 42/06) is the responsibility of the operator.

Instructions and footnotes:

¹ ENTER the manure production estimates 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.

² ENTER the number of days worth of manure that will be produced. For certain manure storage facilities the minimum storage requirement is 400 days. For feed and concrete manure storage facilities the minimum storage requirement is 250.

³ ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).

⁴ Milking cows includes all milking and dry cows.

⁵ Default manure production estimates for semi-solid and liquid dairy manure and washwater from the milking parlor.

⁶ 2 inches of wood shavings or a layer of straw pushed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/ft³.

⁷ One-third litter floor, two-thirds solid floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/ft³.

⁸ Manure removed from barn at 90% moisture content with a density of 50 lb/ft³.

⁹ poultry operation using litter (solid pack) must provide an estimate of yearly manure production

This spread sheet does not account for sheep.
Based on historical manure handling, the proponent
estimates annual manure production (feces & straw)
to 3800 tons annually.

If yes, please describe _____

Manure Application Method

The Livestock Manure and Mortalities Management Regulation requires the registration of annual manure management plans for new or expanding operations with 300 Animal Units or more.

Does the operation currently file an annual Manure Management Plan with Manitoba Conservation and Water Stewardship? (For operations with 300 Animal Units or more, only)

☐ yes

☒ no

Manure application methods and the season in which manure is applied affect odour, nutrient availability, crop response, land base requirements and the risk of water contamination.

Proposed application method:

☐ broadcast

☒ broadcast and incorporation within 48 hours

☐ injection

The Livestock Manure and Mortalities Management Regulation prohibits the application of manure from November 10 of one year to April 10 of the following year (winter application).

Time of year for application: ☐ spring ☐ summer ☒ fall

The Livestock Manure and Mortalities Management Regulation puts restrictions on fall application of manure in the Red River Valley Special Management Area.

The proposed spread fields:

are ☐

are not ☒ (with the exception of RL 544 - Parish of Ste-Agathe)

in the Red River Valley Special Management Area.

Land Available for Manure Application ?

The land available for manure application includes all suitable land (owned, leased or under agreement) that is available to the operation for manure application.

Under the Livestock Manure and Mortalities Management Regulation and the Nutrient Management Regulation, application of nutrients is not permitted on Agriculture Capability Class 6, 7 and unimproved organic soils (Nutrient Management Zone 4) and within Nutrient Buffer Zones.

Areas of a field that are Class 6, 7, unimproved organic soils (Nutrient Management Zone 4) or areas within the nutrient buffer zones are considered unsuitable for manure application. In addition, fields with 60 parts per million (ppm) Olsen phosphorus (P) in the top six inches (15 centimetres) of soil cannot be included in the land base calculation.

Nutrients cannot be applied within the Nutrient Buffer Zones as outlined in the Nutrient Management Regulation (62/2008) and illustrated in the [Setback Requirements From Water Features Table](#).

Has the setback area for all water features been observed and excluded from land base calculations for this operation?

☒ yes

☐ no

Use the [Manure Application Field Characteristics Table](#) to determine the following:

Total suitable area available for manure application

1 432 acres

(an additional 230 acres is available through spreading agreements even though these fields have not been soil sampled yet)

☒ Manure Application Field Characteristics Table attached

Copies of [soil test reports](#) that are no more than 12 months old must also be included with this submission.

☒ Soil test reports for the required area for manure application attached.

Land Required for Manure Application

Long term, land base requirements for manure application are calculated based on estimates of the quantity of nutrients (nitrogen and phosphorus) excreted by livestock and the removal of nutrients by the proposed crops.

Phosphorus

The quantity of phosphorus excreted by the livestock depends on the type, number and size of livestock, the quantity and availability of phosphorus fed to the livestock and the amount retained by the livestock.

The removal of phosphorus by crops depends on the crops grown and the historical crop yield averages. (See the [Crop Rotation Table](#)).

The [Livestock Manure and Mortalities Management Regulation](#) requires that "sufficient land is available to the operator to implement an appropriate manure management plan" before Manitoba Conservation and Water Stewardship will issue a permit for a manure storage facility.

"Certain Areas" are defined by the [Livestock Manure and Mortalities Management Regulation](#) (M.R. 42/98) as areas where the amount of phosphorus in the manure produced annually by livestock in an area of not less than 93.24 km² is greater than two times the annual crop removal rate of P₂O₅ in that area. Currently the rural municipalities of Hanover and La Broquerie are considered to be "certain areas".

A livestock operation is considered to be located within a "certain area" if any part of the operation is located within the "certain area". This may include, but not limited to, barn(s), confined livestock area(s), field storage location(s), manure storage facility(ies), and/or spread filed(s).

MANURE APPLICATION FIELD CHARACTERISTICS TABLE

	A	B	C	D	E	F	G	H	I	J	K
Field	Legal Description	Rural Municipality	O/LA	Total Acreage	Setbacks, including features	Net Acreage for Manure Application	Agriculture Capability Class and Subclass	Soil Nitrate (lb/acre) 0-24	Soil Phosphorus (ppm Olsen P) 0-6 inches	Development Plan Designation	Zoning
1	N1/2 SE28-5-6E	Hanover	O	80	Prop. line/surface water	75	3M4M	108	55	Rural - BL 2170	Rural - BL 2171
2	S1/2 SE28-5-6E	Hanover	O	80	Prop. line/surface water	75	3M4M	32	56	Rural - BL 2170	Rural - BL 2171
3	NW28-5-6E	Hanover	O	160	Prop. line/surface water	117	5W (6W excluded)	103	11	Rural - BL 2170	Rural - BL 2171
4	SW27-5-6E	Hanover	L	95	Prop. line/surface water	75	3M5W	61	44	Rural - BL 2170	Rural - BL 2171
5	SE9-5-6E	Hanover	A	80	Prop. line/surface water	70	3M	14	21	Rural - BL 2170	Rural - BL 2171
6	SE10-5-6E	Hanover	A	160	Prop. line/surface water	80	3M5M	40	33	Rural - BL 2170	Rural - BL 2171
7	SW33-5-7E	La Broquerie	A	150	Prop. line/surface water	145	3M2MP	53	37	Ag 1 - BL 20-2011	RA1 - BL 10-2013
8	SW21-5-6E	Hanover	A	120	Prop. line/surface water	90	3M5W	30	5	Rural - BL 2170	Rural - BL 2171
9	NE16-5-6E	Hanover	A	160	Prop. line/surface water	155	3M5W	17	9	Rural - BL 2170	Rural - BL 2171
10	SE27-5-6E	Hanover	A	78	Prop. line/surface water	50	3M5W	10	15	Rural - BL 2170	Rural - BL 2171
11	RL 544 PAG	Ritchot	A	250	Prop. line/surface water	240	2W1	164	32	BL 2110	DP BL 2-2010
12	SE7-6-7E	La Broquerie	A	160	Prop. line/surface water	160	4DP3M	5	15	Ag 1 - BL 20-2011	RA1 - BL 10-2013
13	S1/2 NE27-5-5E	Hanover	A	80	Prop. line/surface water	50	3M5M	38	19	Rural - BL 2170	Rural - BL 2171
14	N1/2 NE27-5-5E	Hanover	A	80	Prop. line/surface water	50	3M5W	115	40	Rural - BL 2170	Rural - BL 2171
15											
16											
17											
18											
19											
20											
Total Net Acreage for Manure Application:						1432					

- Enter the legal description for each parcel of land that will receive manure: Sec, Twp, Rge or River Lot (including parish).
- Identify the Rural Municipality in which the parcel is located.
- Indicate how the land has been secured for manure application: O - Own / L - Lease / A - Agreement
- Enter the total acreage for the parcel.
- Enter setbacks from surface water or groundwater features that reduce the land available for manure application; include identification of type of feature (e.g. 8m, Order 3
- Enter the net long-term acreage available for manure application for the parcel after taking into account setbacks and excluding Class 5, 7 and unimproved organic soils.
- Enter the agriculture capability class and subclass ratings for the acreage available for manure application.
- Provide soil test results for nitrate-N in lb/ac at the 0-24 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-testing
- Provide soil test results for phosphorus ppm Olsen P at 0-6 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-
- Please indicate the Zoning By-law and its by-law number in addition to the map designation for each field
- Please indicate the Zoning By-law and its by-law number in addition to the zoning for each field

MANURE APPLICATION FIELD CHARACTERISTICS TABLE

	A	B	C	D	E	F	G	H	I	J	K
Field	Legal Description	Rural Municipality	O/L/A	Total Acreage	Setbacks, including features	Net Acreage for Manure Application	Agriculture Capability Class and Subclass	Soil Nitrate (lb/acre) 0-24	Soil Phosphorus (ppm Olsen P) 0-6 inches	Development Plan Designation	Zoning
1	SW28-5-6E	Hanover	L	160	Prop. line/surface water	145	3M5W	299	67	Rural - BL 2170	Rural - BL 2171
2	NE21-5-6E	Hanover	L	160	Prop. line/surface water	70	3M5W	198	101	Rural - BL 2170	Rural - BL 2171
3	NW21-5-6E	Hanover	L	77	Prop. line/surface water	70	3M5W			Rural - BL 2170	Rural - BL 2171
4	SE32-5-6E	Hanover	A	80	Prop. line/surface water	65	3M5M	62	66	Rural - BL 2170	Rural - BL 2171
5	SW33-5-6E	Hanover	A	80	Prop. line/surface water	75	3M5W	53	77	Rural - BL 2170	Rural - BL 2171
6	SE17-5-6E	Hanover	A	100	Prop. line/surface water	70	2MP3M			Rural - BL 2170	Rural - BL 2171
7	NW 12-5-6E	Hanover	A	160	Prop. line/surface water	40	3M(6W excluded)	115	189	Rural - BL 2170	Rural - BL 2171
8	NE22-5-7E	La Broquerie	A	160	Prop. line/surface water	90	3P(6W excluded)			Ag 1 - BL 20-2011	RA1 - BL 10-2013
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
Total Net Acreage for Manure Application:						625					

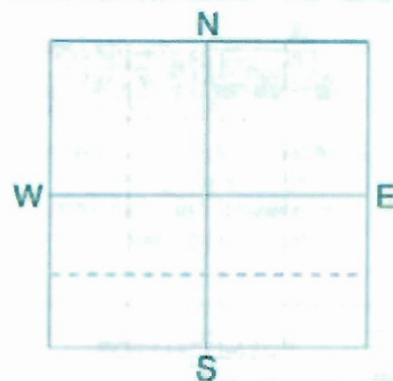
- Enter the legal description for each parcel of land that will receive manure: Sec, Twp, Rge or River Lot (including parish).
- Identify the Rural Municipality in which the parcel is located.
- Indicate how the land has been secured for manure application: O - Own / L - Lease / A - Agreement
- Enter the total acreage for the parcel.
- Enter setbacks from surface water or groundwater features that reduce the land available for manure application; include identification of type of feature (e.g. Brn, Order 3
- Enter the net long-term acreage available for manure application for the parcel after taking into account setbacks and excluding Class 6, 7 and unimproved organic soils.
- Enter the agriculture capability class and subclass ratings for the acreage available for manure application.
- Provide soil test results for nitrate-N in lb/acre at the 0-24 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-testing
- Provide soil test results for phosphorus ppm Olsen P at 0-6 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-
- Please indicate the Zoning By-law and its by-law number in addition to the zoning for each field



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

SOIL TEST REPORT

FIELD ID SE 28-05-06E
SAMPLE ID
FIELD NAME SE 28-05-06E N $\frac{1}{2}$
COUNTY Home
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0V0

REF # 894732 BOX # 0
LAB # NW21691

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil			Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice					
Nitrate	0-6"	51 lb/ac	Low	Med	High	Grass/Alfalfa			Corn-Silage			Soybeans						
	6-24"	57 lb/ac				YIELD GOAL			YIELD GOAL			YIELD GOAL						
						4 Tons			14 Tons			40 BU						
	0-24"	108 lb/ac				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES						
						Broadcast			Broadcast			Broadcast						
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION					
	Olsen	55 ppm				N	0		N	38		N	***					
Phosphorus						P ₂ O ₅	0		P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0					
Potassium		366 ppm				K ₂ O	0		K ₂ O	10	Band (2x2) *	K ₂ O	0					
						Cl			Cl			Cl						
Chloride						S	10	Broadcast (Trial)	S	10	Broadcast (Trial)	S	10	Broadcast (Trial)				
Sulfur	0-6"	28 lb/ac				B			B			B						
Baron	6-24"	42 lb/ac				Zn	0		Zn	0		Zn	0					
						Fe			Fe			Fe						
Zinc		2.23 ppm				Mn			Mn			Mn						
Iron						Cu	2	Broadcast (Trial)	Cu	0		Cu	0					
Manganese						Mg			Mg			Mg						
Copper		0.46 ppm				Lime			Lime			Lime						
Magnesium																		
Calcium																		
Sodium																		
Org.Matter		3.5 %																
Carbonate(CCE)																		
	0-6"	0.28 mmho/cm				Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)									
	6-24"	0.18 mmho/cm				0-6" 8.0			% Ca	% Mg	% K	% Na	% H					
Ed. Salts						1-24" 8.4												

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

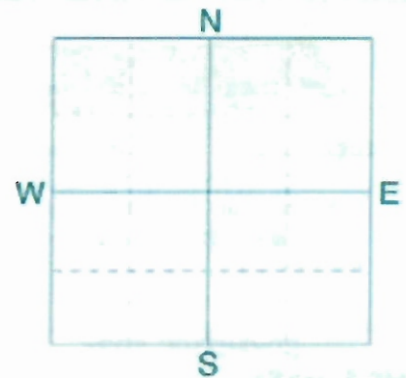
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 33 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID SE 28-05-06E
SAMPLE ID
FIELD NAME SE 28-05-06E *Sk2*
COUNTY Raymond
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0Y0

REF # 894731 BOX # 0
LAB # NW21658

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
		Low	Med	High		Grass/Alfalfa			Corn-Silage			Soybeans		
						YIELD GOAL			YIELD GOAL			YIELD GOAL		
						4 Tons			14 Tons			40 BU		
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
						Broadcast			Broadcast			Broadcast		
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
Nitrate	0-6" 20 lb/ac 6-24" 12 lb/ac					N	26		N	114		N	***	
Olsen Phosphorus	56 ppm					P ₂ O ₅	0		P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0	
Potassium	109 ppm					K ₂ O	60	Broadcast	K ₂ O	86	Broadcast	K ₂ O	53	Broadcast
Chloride						Cl			Cl			Cl		
Sulfur	0-6" 22 lb/ac 6-24" 42 lb/ac					S	10	Broadcast (Trial)	S	10	Broadcast (Trial)	S	10	Broadcast (Trial)
Boron						B			B			B		
Zinc	2.41 ppm					Zn	0		Zn	0		Zn	0	
Iron						Fe			Fe			Fe		
Manganese						Mn			Mn			Mn		
Copper	0.38 ppm					Cu	2	Broadcast (Trial)	Cu	0		Cu	0	
Magnesium						Mg			Mg			Mg		
Calcium						Lime			Lime			Lime		
Sodium														
Org. Matter	3.9 %													
Carbonate (CEC)														
Soil Salts	0-6" 0.21 mmho/cm 6-24" 0.15 mmho/cm					Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
									% Ca	% Mg	% K	% Na	% H	
						0-6" 8.0								
						6-24" 8.3								

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 40 K₂O = 192 A/GVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 50 K₂O = 116 A/GVISE Broadcast guidelines will build P & K test levels to the high range over several years.

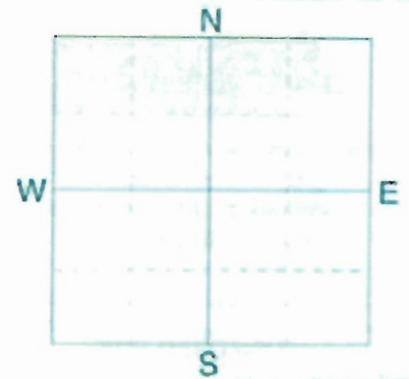
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 35 K₂O = 60 A/GVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID SW 28-05-06E
SAMPLE ID
FIELD NAME SW 28-05-06E
COUNTY Dyback
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB R0A 0V0

REF # 894733 BOX # 0
LAB # NW21668

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
			Grass/Alfalfa		Corn-Silage		Soybeans	
0-6" 83 lb/ac			YIELD GOAL		YIELD GOAL		YIELD GOAL	
6-24" 216 lb/ac			4 Tons		14 Tons		40 BU	
0-24" 299 lb/ac			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Nitrate			Broadcast		Broadcast		Broadcast	
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
Phosphorus	Olsen 67 ppm		N	0	N	10	N	***
			P ₂ O ₅	0	P ₂ O ₅	15	P ₂ O ₅	0
Potassium	541 ppm		K ₂ O	0	K ₂ O	10	K ₂ O	0
			Cl		Cl		Cl	
Chloride	0-6" 120 lb/ac		S	0	S	0	S	0
			B		B		B	
Sulfur	6-24" 360 lb/ac		Zn	0	Zn	0	Zn	0
			Fe		Fe		Fe	
Boron			Mn		Mn		Mn	
			Cu	1	Cu	0	Cu	0
Zinc	2.95 ppm		Mg		Mg		Mg	
			Lime		Lime		Lime	
Iron			Broadcast (Trial)					
Manganese								
Copper	0.58 ppm							
Magnesium								
Calcium								
Sodium								
Org.Matter	18.5 %							
Carbonate(CCE)	0-6" 0.65 mmho/cm							
Sol.Salts	6-24" 0.94 mmho/cm							

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

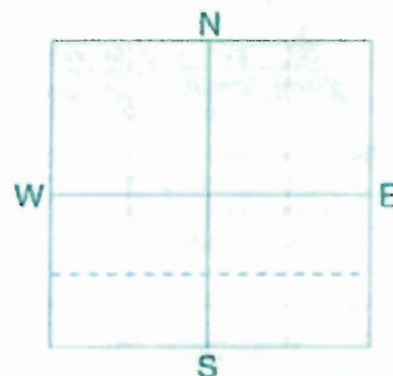
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

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

SOIL TEST REPORT

FIELD ID NW 28--05-06E
SAMPLE ID
FIELD NAME NW 28-05-06E
COUNTY Broesky
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, NB

RDA OVO

REF # 894734 BOX # 0
LAB # NW21678

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		Very Low	Low	Med	High	Grass/Alfalfa			Corn-Silage			Soybeans				
						YIELD GOAL			YIELD GOAL			YIELD GOAL				
						4 Tons			14 Tons			40 BU				
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Broadcast			Broadcast			Broadcast				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Nitrate	0-6" 55 lb/ac 6-24" 48 lb/ac					N	0		N	43		N	***			
Phosphorus						P ₂ O ₅	40	Broadcast	P ₂ O ₅	72	Broadcast	P ₂ O ₅	45	Broadcast		
Potassium						K ₂ O	122	Broadcast	K ₂ O	113	Broadcast	K ₂ O	76	Broadcast		
Chloride						Cl			Cl			Cl				
Sulfur	0-6" 104 lb/ac 6-24" 324 lb/ac					S	0		S	0		S	0			
Boron						B			B			B				
Zinc						Zn	0		Zn	0		Zn	0			
Iron						Fe			Fe			Fe				
Manganese						Mn			Mn			Mn				
Copper						Cu	1	Broadcast (Trial)	Cu	0		Cu	0			
Magnesium						Mg			Mg			Mg				
Calcium						Lime			Lime			Lime				
Sodium																
Org.Matter																
Carbonate(CCE)																
	0-6" 0.48 mmho/cm 6-24" 0.4 mmho/cm					Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)							
Sol. Salts						0-6" 8.0 6-24" 8.2			% Ca	% Mg	% K	% Na	% H			

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. **Crop Removal:** P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K20 = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

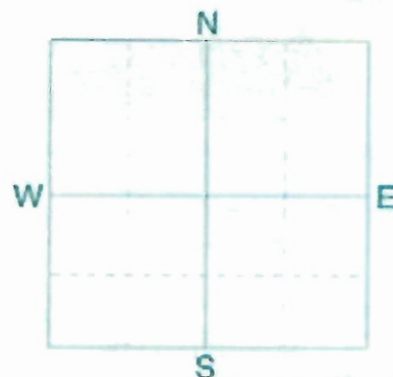
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K20 = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID SW 27-05-06E
SAMPLE ID
FIELD NAME SW 27-05-06E
COUNTY Zoebel
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB R0A 0V0

REF # 894735 BOX # 0
LAB # NW21698

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation	1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
			Grass/Alfalfa			Corn-Silage			Soybeans				
YIELD GOAL			YIELD GOAL			YIELD GOAL			YIELD GOAL				
4 Tons			4 Tons			14 Tons			40 BU				
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
Broadcast			Broadcast			Broadcast			Broadcast				
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION		
N		0	N		85	N		***	N				
P ₂ O ₅		0	P ₂ O ₅		15	Band (2x2) "			P ₂ O ₅		0		
K ₂ O		0	K ₂ O		64	Broadcast			K ₂ O		34		
Cl			Cl						Cl				
S		10	S		0	Broadcast (Trial)			S		10		
B			B						B				
Zn		0	Zn		0				Zn		0		
Fe			Fe						Fe				
Mn			Mn						Mn				
Cu		2	Cu		0	Broadcast (Trial)			Cu		0		
Mg			Mg						Mg				
Lime			Lime						Lime				
Soil pH		Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)								
% Ca		% Mg	% K	% Na	% H								
0-6" 7.9													
6-24" 8.5													

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 40 K2O = 19.2 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

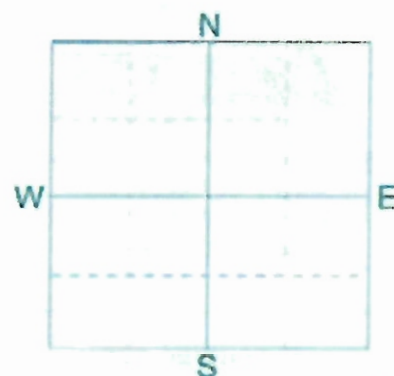
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID NE 21-05-06E
SAMPLE ID
FIELD NAME NE 21-05-06E
COUNTY Jeramla
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4425
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0V0

REF # 894736 BOX # 0
LAB # NW21697

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
			Grass/Alfalfa		Corn-Silage		Soybeans	
			YIELD GOAL		YIELD GOAL		YIELD GOAL	
			4 Tons		14 Tons		40 BU	
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
			Broadcast		Broadcast		Broadcast	
Nitrate	0-6"	102 lb/ac	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
	6-24"	96 lb/ac	N	0	N	10	N	0
Phosphorus	0-6"	198 lb/ac	P ₂ O ₅	0	P ₂ O ₅	0	P ₂ O ₅	0
	6-24"	198 lb/ac	K ₂ O	0	K ₂ O	10	K ₂ O	0
Potassium	0-6"	101 ppm	Cl		Cl		Cl	
	6-24"	291 ppm	S	0	S	0	S	0
Chloride	0-6"	38 lb/ac	B		B		B	
	6-24"	84 lb/ac	Zn	0	Zn	0	Zn	0
Sulfur	0-6"	4.53 ppm	Fe		Fe		Fe	
	6-24"	4.53 ppm	Mn		Mn		Mn	
Boron	0-6"	0.58 ppm	Cu	1	Cu	0	Cu	0
	6-24"	0.58 ppm	Mg		Mg		Mg	
Zinc	0-6"	0.58 ppm	Lime		Lime		Lime	
	6-24"	0.58 ppm						
Iron	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Manganese	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Copper	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Magnesium	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Calcium	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Sodium	0-6"	0.58 ppm						
	6-24"	0.58 ppm						
Org.Matter	0-6"	2.9 %						
	6-24"	2.9 %						
Carbonate(CCS)	0-6"	0.44 mmho/cm						
	6-24"	0.25 mmho/cm						
Sol. Salts	0-6"	0.44 mmho/cm						
	6-24"	0.25 mmho/cm						

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 40 K2O = 152 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 118 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

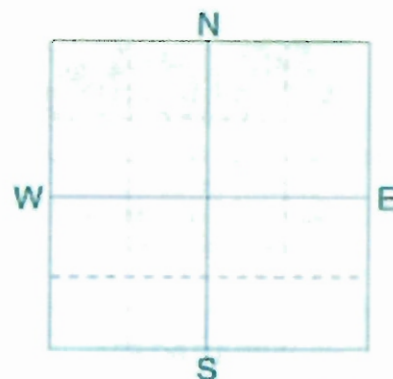
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID **SE 09-05-06E**
SAMPLE ID
FIELD NAME **SE 09-05-06E**
COUNTY **Hunter**
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Grass/Alfalfa**



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB **RDA 0V0**

REF # **894737** BOX # **0**
LAB # **NW21693**

Date Sampled **05/03/2014**

Date Received **05/09/2014**

Date Reported **5/9/2014**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		Low	Med	High		Grass/Alfalfa			Corn-Silage			Soybeans				
						YIELD GOAL			YIELD GOAL			YIELD GOAL				
						4 Tons			14 Tons			40 BU				
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Broadcast			Broadcast			Broadcast				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Nitrate	0-6" 5 lb/ac 6-24" 9 lb/ac					N	46		N	132		N				
Phosphorus						P ₂ O ₅	0		P ₂ O ₅	32	Broadcast	P ₂ O ₅	0			
Potassium						K ₂ O	117	Broadcast	K ₂ O	111	Broadcast	K ₂ O	74	Broadcast		
Chloride						Cl			Cl			Cl				
	0-6" 14 lb/ac 6-24" 36 lb/ac					S	20	Broadcast	S	20	Broadcast	S	20	Broadcast		
Culfur						B			B			B				
Boron						Zn	0		Zn	0		Zn	0			
Zinc						Fe			Fe			Fe				
Iron						Mn			Mn			Mn				
Manganese						Cu	1	Broadcast (Trial)	Cu	0		Cu	0			
Copper						Mg			Mg			Mg				
Magnesium						Lime			Lime			Lime				
Calcium																
Sodium																
Org.Matter																
Carbonate(CEC)																
	0-6" 0.13 mmho/cm 6-24" 0.11 mmho/cm															
Soil Salts																

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 40 K₂O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 50 K₂O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

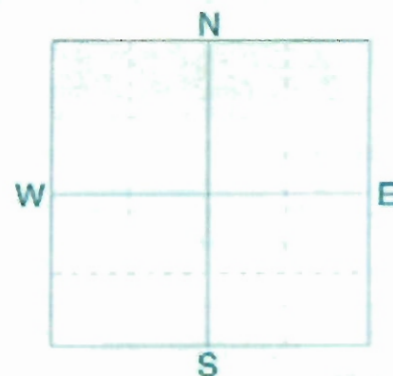
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ = 35 K₂O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID **SE 10-05-06E**
SAMPLE ID
FIELD NAME **SE 10-05-06E**
COUNTY **Hunter**
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Grass/Alfalfa**



SUBMITTED FOR:

Smith Sheep Farm

SUBMITTED BY: DU4426

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, NB

RDA 0V0

REF # **894738** BOX # **0**
LAB # **NW21676**

Grunthal, MB

Date Sampled **05/03/2014**

Date Received **05/09/2014**

Date Reported **5/9/2014**

Nutrient In The Soil			Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
			Low	Med	High			Grass/Alfalfa		Corn-Silage		Soybeans					
	0-6"	16 lb/ac						YIELD GOAL		YIELD GOAL		YIELD GOAL					
	6-24"	24 lb/ac	.....					4 Tons		14 Tons		40 BU				
	0-24"	40 lb/ac						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
Nitrate								Broadcast		Broadcast		Broadcast					
	Olsen	33 ppm	.....					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus			.....					N	20	N	106	N	***			
Potassium		74 ppm	.....					P ₂ O ₅	0	P ₂ O ₅	15	Band (2x2) *	P ₂ O ₅	0		
								K ₂ O	105	Broadcast	K ₂ O	106	Broadcast	K ₂ O	70		
Chloride								Cl		Cl			Cl				
	0-6"	38 lb/ac	.....					S	0	S	0		S	0		
Sulfur	6-24"	66 lb/ac	.....					B		B			B			
Boron								Zn	0	Zn	0		Zn	0			
Zinc		6.08 ppm	.....					Fe		Fe			Fe			
Iron								Mn		Mn			Mn				
Manganese								Cu	0	Cu	0		Cu	0			
Copper		2.68 ppm	.....					Mg		Mg			Mg			
Magnesium								Lime		Lime			Lime				
Calcium																	
Sodium																	
Org.Matter		2.7 %	.....													
Carbonate(CCE)																	
	0-6"	0.12 mmho/cm	...														
	6-24"	0.1 mmho/cm	..														
Sol. Salts																	

Soil pH		Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
				% Ca	% Mg	% K	% Na	% H
0-6"	7.3							
6-24"	6.2							

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192. AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116. AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

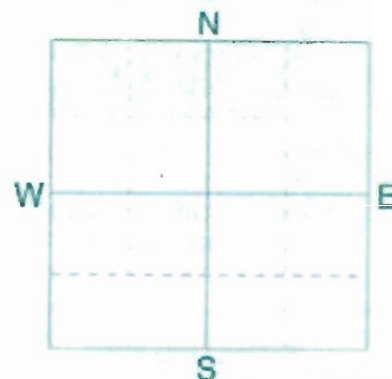
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K2O = 60. AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID SW 33-05-07E
SAMPLE ID
FIELD NAMESW 33-05-07E
COUNTY DeJong
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Corn-Grain



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0V0

REF # 894742 BOX # 0
LAB # NW21689

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
Nitrate	0-6"	5 lb/ac	Corn-Grain		Corn-Silage		Soybeans	
	6-24"	48 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL	
			160 BU		14 Tons		40 BU	
	0-24"	53 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Phosphorus	Olsen		Broadcast		Broadcast		Broadcast	
		37 ppm	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
			N	139	N	93	N	***
			P ₂ O ₅	15	P ₂ O ₅	15	P ₂ O ₅	0
Sulfur	Olsen		Band (2x2) "		Band (2x2) "		Broadcast	
		93 ppm	K ₂ O	116	K ₂ O	95	K ₂ O	61
			Cl		Cl		Cl	
			S	15	S	15	S	15
Cation Exchange Capacity	0-6"		Broadcast (Trial)		Broadcast (Trial)		Broadcast (Trial)	
	6-24"	48 lb/ac	B		B		B	
			Zn	0	Zn	0	Zn	0
			Fe		Fe		Fe	
Soil Salts	0-6"		Mn		Mn		Mn	
	6-24"	2.17 ppm	Cu	0	Cu	0	Cu	0
			Mg		Mg		Mg	
			Lime		Lime		Lime	
			Soil pH		Buffer pH		Cation Exchange Capacity	
							% Base Saturation (Typical Range)	
							% Ca	% Mg
							% K	% Na
							% H	
			0-6" 8.1					
			6-24" 8.2					

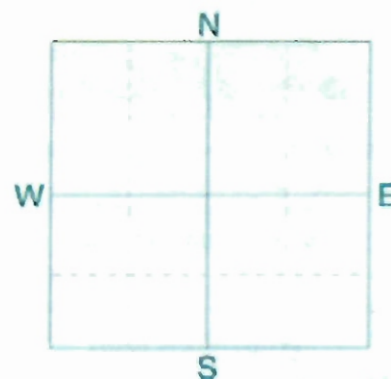
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 64 K2O = 45 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 80 K2O = 51 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 15 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID **SW 21-05-06E**
SAMPLE ID
FIELD NAME **SW 21-05-06E**
COUNTY **Chomoby**
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Grass/Alfalfa**



SUBMITTED FOR:

Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

RDA 0Y0

REF # **894739** BOX # **0**
LAB # **NW21694**

Date Sampled **05/03/2014**

Date Received **05/09/2014**

Date Reported **5/9/2014**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice					
Nitrate	0-6"	12 lb/ac	Very	Low	Med	High	Grass/Alfalfa			Corn-Silage			Soybeans				
	6-24"	18 lb/ac	*****				YIELD GOAL			YIELD GOAL			YIELD GOAL				
							4 Tons			14 Tons			40 BU				
	0-24"	30 lb/ac					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
							Broadcast			Broadcast			Broadcast				
							LB/ACRE	APPLICATION		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION	
Olsen		5 ppm	*****				N	30		N	116		N	***			
Phosphorus							P ₂ O ₅	62	Broadcast	P ₂ O ₅	95	Broadcast	P ₂ O ₅	64	Broadcast		
Potassium		63 ppm	*****				K ₂ O	119	Broadcast	K ₂ O	112	Broadcast	K ₂ O	75	Broadcast		
Chloride							Cl			Cl			Cl				
Sulfur		0-6"	68 lb/ac	*****			S	0		S	0		S	0			
Boron		6-24"	324 lb/ac	*****			B			B			B				
Zinc							Zn	0		Zn	2	Broadcast	Zn	0			
Iron							Fe			Fe			Fe				
Manganese							Mn			Mn			Mn				
Copper							Cu	2	Broadcast (Trial)	Cu	0		Cu	0			
Magnesium		0.49 ppm	*****				Mg			Mg			Mg				
Calcium							Lime			Lime			Lime				
Sodium																	
Org Matter																	
Carbonate(CCE)		4.3 %	*****														
Sol. Salts																	
		0-6"	0.33 mmho/cm	*****													
		6-24"	0.46 mmho/cm	*****													

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

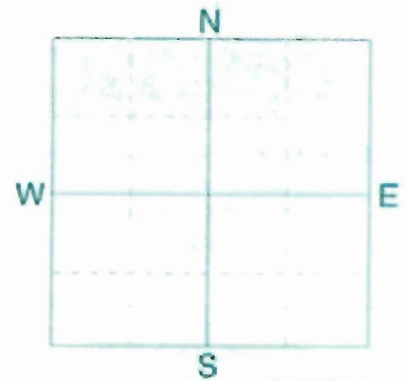
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID **NE 16-05-06E**
SAMPLE ID
FIELD NAME **NE 16-05-06E**
COUNTY **Wien**
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Grass/Alfalfa**



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0V0

REF # **894740** BOX # **0**
LAB # **NW21674**

Date Sampled **05/03/2014**

Date Received **05/09/2014**

Date Reported **5/9/2014**

Nutrient In The Soil			Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Nitrate	0-6"	8 lb/ac	***	Low	Med	High	Grass/Alfalfa			Corn-Silage			Soybeans		
	6-24"	9 lb/ac					YIELD GOAL			YIELD GOAL			YIELD GOAL		
	0-24"	17 lb/ac					4 Tons			14 Tons			40 BU		
							SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
							Broadcast			Broadcast			Broadcast		
	Olsen	9 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus							N	43		N	129		N	***	
Potassium		83 ppm	*****				P ₂ O ₅	48	Broadcast	P ₂ O ₅	80	Broadcast	P ₂ O ₅	51	Broadcast
							K ₂ O	94	Broadcast	K ₂ O	101	Broadcast	K ₂ O	65	Broadcast
Chloride							Cl			Cl			Cl		
	0-6"	74 lb/ac	*****				S	0		S	0		S	0	
Sulfur	6-24"	168 lb/ac	*****				B			B			B		
Boron							Zn	0		Zn	2	Broadcast	Zn	0	
Zinc		1.08 ppm	*****				Fe			Fe			Fe		
Iron							Mn			Mn			Mn		
Manganese							Cu	1	Broadcast (Trial)	Cu	0		Cu	0	
Copper		0.58 ppm	*****				Mg			Mg			Mg		
Magnesium							Lime			Lime			Lime		
Calcium															
Sodium															
Org.Matter		5.9 %	*****												
Carbonate (ECE)							Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
	0-6"	0.33 mmho/cm	*****				0-5" 8.1			% Ca	% Mg	% K	% Na	% H	
Soil Salts	6-24"	0.25 mmho/cm	*****				6-24" 8.3								

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ + 40 K₂O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ + 50 K₂O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

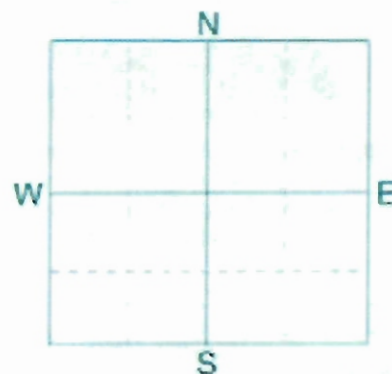
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P₂O₅ + 25 K₂O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/a with a limbed soybean history.



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

SOIL TEST REPORT

FIELD ID SE 27-05-06E
SAMPLE ID
FIELD NAME SE 27-05-06E
COUNTY Runkowsky
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP Grass/Alfalfa



SUBMITTED FOR:

Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131

KLEEFELD, MB

RDA 0V0

REF # 894741 BOX # 0
LAB # NW21657

Date Sampled 05/03/2014

Date Received 05/09/2014

Date Reported 5/9/2014

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		Low	Med	High		Grass/Alfalfa			Corn-Silage			Soybeans				
						YIELD GOAL			YIELD GOAL			YIELD GOAL				
						4 Tons			14 Tons			40 BU				
						SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Broadcast			Broadcast			Broadcast				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Nitrate	0-6" 6-24"	4 lb/ac 6 lb/ac				N	30		N	136		N	***			
Olsen Phosphorus		15 ppm				P ₂ O ₅	26	Broadcast	P ₂ O ₅	56	Broadcast	P ₂ O ₅	32	Broadcast		
Potassium		66 ppm				K ₂ O	90	Broadcast	K ₂ O	99	Broadcast	K ₂ O	64	Broadcast		
Chloride						Cl			Cl			Cl				
Sulfur	0-6" 6-24"	38 lb/ac 84 lb/ac				S	0		S	0		S	0			
Boron						B			B			B				
Zinc		1.45 ppm				Zn	0		Zn	2	Broadcast	Zn	0			
Iron						Fe			Fe			Fe				
Manganese						Mn			Mn			Mn				
Copper		0.79 ppm				Cu	1	Broadcast (Trial)	Cu	0		Cu	0			
Magnesium						Mg			Mg			Mg				
Calcium						Lime			Lime			Lime				
Sodium																
Org.Matter		3.4 %														
Carbonate(CCE)																
	0-6" 6-24"	0.26 mmho/cm 0.22 mmho/cm				Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)							
									% Ca	% Mg	% K	% Na	% H			
						0-6" 8.3										
						6-24" 6.4										
Sol. Salts																

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

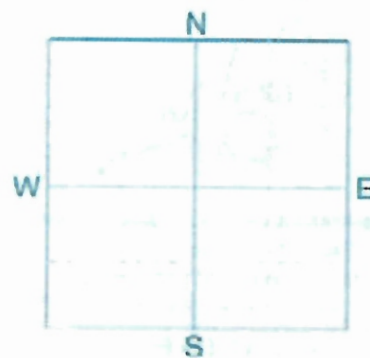
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



Soil Analysis by Agvise Laboratories
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 643-4109

SOIL TEST REPORT

FIELD ID RL 544
SAMPLE ID
FIELD NAME RL 544
COUNTY Dustin Wiebe
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB R0A 0V0

REF # 911667 BOX # 0
LAB # NW26970

Date Sampled 05/31/2014

Date Received 06/06/2014

Date Reported 6/6/2014

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
Nitrogen	0-6"	56 lb/ac	Corn-Silage		Corn-Grain		Grass/Alfalfa	
	6-24"	108 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL	
			17 Tons		140 BU		4 Tons	
	0-24"	184 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Phosphorus	Broadcast		Broadcast		Broadcast		Broadcast	
	Olsen	32 ppm	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
			N	13	N	28	N	0
			P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0
Potassium		557 ppm						
			K ₂ O	10 Band (2x2) *	K ₂ O	10 Band (2x2) *	K ₂ O	0
			Cl		Cl		Cl	
			S	0	S	0	S	0
Chloride	0-6"	54 lb/ac						
	6-24"	72 lb/ac						
			B		B		B	
			Zn	0	Zn	3 Broadcast	Zn	0
Sulfur								
			Fe		Fe		Fe	
			Mn		Mn		Mn	
			Cu	0	Cu	0	Cu	0
Boron								
			Mg		Mg		Mg	
			Lime	0	Lime	0	Lime	0
Zinc		1.45 ppm						
Iron								
Manganese								
Copper		1.61 ppm						
Magnesium								
Calcium								
Sodium								
Organic Matter		7.1 %						
Carbonate (CO ₃)								
Electrical Conductivity	0-6"	0.72 mmho/cm						
	6-24"	0.81 mmho/cm						
Soil Acidity								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 61 K2O = 141 A GVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 64 K2O = 43 A GVISE Broadcast guidelines will build P & K test levels to the high range over several years.

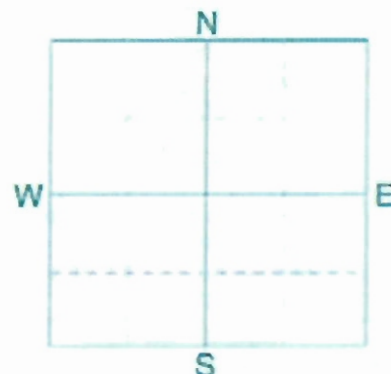
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 191 A GVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID **SW 33-05-06E**
SAMPLE ID
FIELD NAME **SW 33-05-06E**
COUNTY **Dustin Wiebe**
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

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

REF # **921659** BOX # **0**
LAB # **NW28976**

Date Sampled **06/19/2014**

Date Received **06/23/2014**

Date Reported **6/23/2014**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
Nitrate	0-6"	17 lb/ac	Corn-Grain		Corn-Silage		Soybeans	
	6-24"	36 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL	
			150 BU		14 Tons		40 BU	
	0-24"	53 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Phosphorus	Olsen	70 ppm	Broadcast		Broadcast		Broadcast	
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
			N	127	N	93	N	33
			P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0
Potassium		143 ppm	K ₂ O		K ₂ O		K ₂ O	
			61 Broadcast		67 Broadcast		37 Broadcast	
			S		S		S	
			15 Broadcast (Trial)		15 Broadcast (Trial)		15 Broadcast (Trial)	
Sulfur	0-6"	20 lb/ac	B		B		B	
	6-24"	42 lb/ac	Zn		Zn		Zn	
			0		0		0	
			Fe		Fe		Fe	
Boron			Mn		Mn		Mn	
			Cu		Cu		Cu	
			0		0		0	
			Mg		Mg		Mg	
Zinc		5.76 ppm	Lime		Lime		Lime	
			0		0		0	
			Soil pH		Buffer pH		Cation Exchange Capacity	
			0-6" 6.8				% Base Saturation (Typical Range)	
Iron	0-6"	0.14 mmho/cm	6-24" 7.2				% Ca	% Mg
	6-24"	0.1 mmho/cm					% K	% Na
							% H	
Manganese								
Copper		1.64 ppm						
Magnesium								
Calcium								
Sodium								
Org.Matter		1.7 %						
Carbonate(CCE)								
Sol. Salts								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 60 K2O = 41 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 116 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

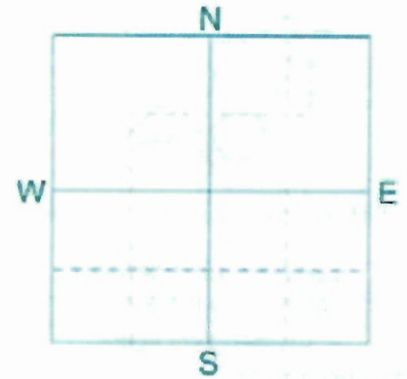
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 33 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



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

SOIL TEST REPORT

FIELD ID SE 32-06-05E
SAMPLE ID
FIELD NAME SE 32-06-05E
COUNTY Dustin Wiebe
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB RDA 0V0

REF # 921660 BOX # 0
LAB # NW28977

Date Sampled 06/19/2014

Date Received 06/23/2014

Date Reported 6/23/2014

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		Low	Med	High		Corn-Grain		Corn-Silage		Soybeans				
						YIELD GOAL		YIELD GOAL		YIELD GOAL				
						150 BU		14 Tons		40 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Broadcast		Broadcast		Broadcast				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Nitrate	0-6" 23 lb/ac 6-24" 39 lb/ac 0-24" 62 lb/ac					N	118	N	84	N	***			
Phosphorus	Olsen 66 ppm					P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	15 Band (2x2) *	P ₂ O ₅	0			
Potassium	153 ppm					K ₂ O	51 Broadcast	K ₂ O	61 Broadcast	K ₂ O	32 Broadcast			
Chloride						Cl		Cl		Cl				
Sulfur	0-6" 16 lb/ac 6-24" 30 lb/ac					S	15 Broadcast (Trial)	S	15 Broadcast (Trial)	S	15 Broadcast (Trial)			
Boron						B		B		B				
Zinc	5.73 ppm					Zn	0	Zn	0	Zn	0			
Iron						Fe		Fe		Fe				
Manganese						Mn		Mn		Mn				
Copper	1.77 ppm					Cu	0	Cu	0	Cu	0			
Magnesium						Mg		Mg		Mg				
Calcium						Lime		Lime		Lime				
Sodium														
Org.Matter	1.5 %													
Carbonate(CCO ₃)														
	0-6" 0.12 mmho/cm 6-24" 0.11 mmho/cm					Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
										% Ca	% Mg	% K	% Na	% H
						0-6" 7.0								
						6-24" 7.3								

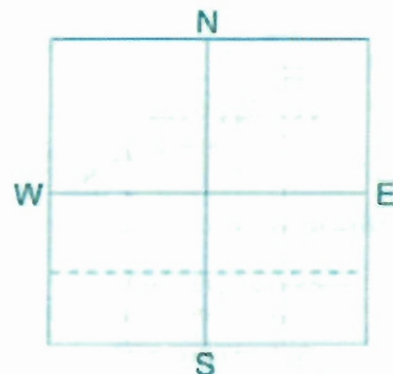
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 60 K2O = 41 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 50 K2O = 31 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 35 K2O = 60 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID SE 17-05-06E
 SAMPLE ID
 FIELD NAME SE 17-05-06E
 COUNTY Doug Chernoboy
 TWP RANGE
 SECTION QTR ACRES 0
 PREV. CROP



SUBMITTED FOR:
 Smith Sheep Farm

Grunthal, MB

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

REF # 911668 BOX # 0
 LAB # NW26958

Date Sampled 05/31/2014

Date Received 06/06/2014

Date Reported 6/8/2014

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice			
Nitrate	0-6"	33 lb/ac	Low	Med	High	Corn-Silage			Corn-Grain			Grass/Alfalfa			
	6-24"	42 lb/ac				YIELD GOAL			YIELD GOAL			YIELD GOAL			
						17 Tons			160 BU			4 Tons			
	0-24"	75 lb/ac				SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			
Broadcast		Broadcast			Broadcast			Broadcast			Broadcast				
LB/ACRE		APPLICATION		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION	
N		102			N		117			N		0			
P ₂ O ₅		49	Broadcast		P ₂ O ₅		43	Broadcast		P ₂ O ₅		0			
K ₂ O		134	Broadcast		K ₂ O		144	Broadcast		K ₂ O		116	Broadcast		
Cl					Cl					Cl					
S		15	Broadcast (Trial)		S		15	Broadcast (Trial)		S		15	Broadcast (Trial)		
B					B					B					
Zn		0			Zn		2	Broadcast		Zn		0			
Fe					Fe					Fe					
Mn					Mn					Mn					
Cu		0			Cu		0			Cu		2	Broadcast (Trial)		
Mg					Mg					Mg					
Lime					Lime					Lime					
Soil pH		Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)									
% Ca		% Mg		% K		% Na		% H							
0-6" 7.8															
6-24" 8.1															
Sol. Sals															

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 61 K20 = 141 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

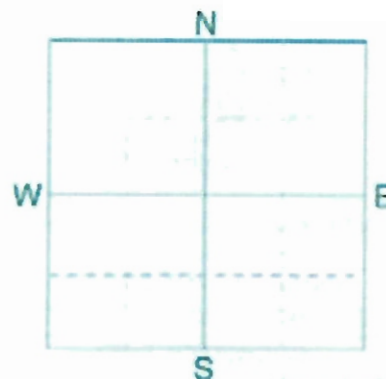
Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 64 K20 = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 49 K20 = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

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

SOIL TEST REPORT

FIELD ID NE 27-05-05E
SAMPLE ID West Side of Yard
FIELD NAME NE 27-05-05E S $\frac{1}{2}$
COUNTY Frank Friesen
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, ME

SUBMITTED BY: DU4426

FOUR OAK AG SOLUTION

31119 RD 27E

BOX 131**KLEEFELD, NB****RDA OVO**

REF # 911671 BOX # 0

LAB # NW26573

Date Sampled 05/31/2014

Date Received 06/06/2014

Date Reported 6/8/2014

Nutrient In The Soil		Interpretation		1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
Nitrate	0-6" 6-24"	14 lb/ac 24 lb/ac	.....	Corn-Silage		Corn-Grain		Grass/Alfalfa		
				YIELD GOAL		YIELD GOAL		YIELD GOAL		
				17 Tons		160 BU		4 Tons		
				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
				Broadcast		Broadcast		Broadcast		
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
			N	139		N	154		N	22
Phosphorus										
Potassium		69 ppm	.....	P ₂ O ₅	49 Broadcast	P ₂ O ₅	43 Broadcast	P ₂ O ₅	0	
				K ₂ O	132 Broadcast	K ₂ O	141 Broadcast	K ₂ O	112	Broadcast
Chloride				Cl		Cl		Cl		
	0-6" 6-24"	120 +lb/ac 114 lb/ac	.....	S	0	S	0	S	0	
Sulfur				B		B		B		
Boron				Zn	2 Broadcast	Zn	4 Broadcast	Zn	0	
Zinc		1.95 ppm	.....	Fe		Fe		Fe		
Iron				Mn		Mn		Mn		
Manganese				Cu	0	Cu	0	Cu	1	Broadcast (Trial)
Copper		0.67 ppm	.....	Mg		Mg		Mg		
Magnesium				Lime		Lime		Lime		
Calcium										
Sodium										
Org.Matter		6.3 %	.....	Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)			
Carbonate(C.C.E.)							% Ca	% Mg	% K	% Na
	0-6" 6-24"	0.9 mmho/cm 0.39 mmho/cm	.....	0-6" 8.2						
Col. Salts				6-24" 8.2						

Drop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal P205 = 61 K20 = 141 A/VISE Broadcast guidelines will build P & K test levels to the high range over several years.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 64 K20 = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

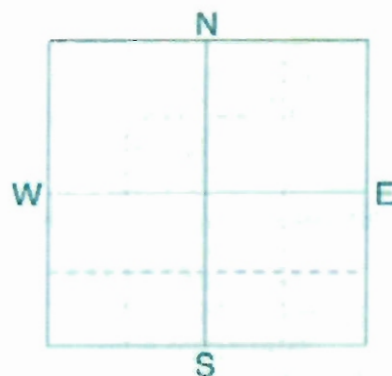
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P 30% - 40 K2O - 10% AGRVISE broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID **NE 27-05-05E**
 SAMPLE ID **East Side of Yard**
 FIELD NAME **NE 27-05-05E N^{1/2}**
 COUNTY **Frank Priesen**
 TWP RANGE
 SECTION QTR ACRES **0**
 PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: **DU4426**
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB R0A 0V0

REF # **911670** BOX # **0**
 LAB # **NW26971**

Date Sampled **05/31/2014**

Date Received **06/06/2014**

Date Reported **6/8/2014**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		Low Med High	Corn-Silage		Corn-Grain		Grass/Alfalfa	
			YIELD GOAL		YIELD GOAL		YIELD GOAL	
			17 Tons		160 BU		4 Tons	
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
			Broadcast		Broadcast		Broadcast	
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
Nitrate	0-6" 28 lb/ac 6-24" 87 lb/ac		N 62		N 77		N 0	
Phosphorus	Olsen 40 ppm		P ₂ O ₅ 15	Band (2x2) "	P ₂ O ₅ 15	Band (2x2) "	P ₂ O ₅ 0	
Potassium	92 ppm		K ₂ O 116	Broadcast	K ₂ O 117	Broadcast	K ₂ O 62	Broadcast
Chloride			Cl		Cl		Cl	
	0-6" 32 lb/ac 6-24" 216 lb/ac		S 0		S 0		S 0	
Sulfur			B		B		B	
Boron			Zn 0		Zn 0		Zn 0	
Zinc	3.22 ppm		Fe		Fe		Fe	
Iron			Mn		Mn		Mn	
Manganese			Cu 0		Cu 0		Cu 0	
Copper	1.22 ppm		Mg		Mg		Mg	
Magnesium			Lime		Lime		Lime	
Calcium			Soil pH Buffer pH Cation Exchange Capacity		% Base Saturation (Typical Range)			
Sodium					% Ca % Mg % K % Na % H			
Org Matter	3.5 %		0-6" 8.1					
Carbonate (CCP)			6-24" 8.3					
Sol. Salts	0-6" 0.3 mmho/cm 6-24" 0.38 mmho/cm							

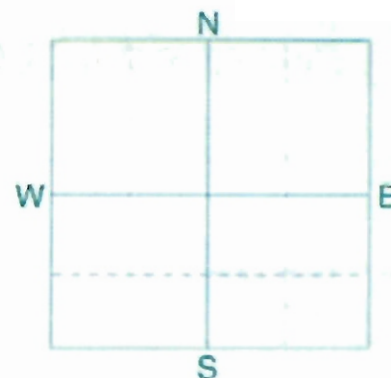
Drop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 61 K2O = 141 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
 Drop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 154 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
 Drop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



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

SOIL TEST REPORT

FIELD ID NW 12-05-06E
SAMPLE ID
FIELD NAME NW 12-05-06E
COUNTY Abe Braun
TWP RANGE
SECTION QTR ACRES 0
PREV. CROP



SUBMITTED FOR:
Smith Sheep Farm

Grunthal, MB

SUBMITTED BY: DU4426
FOUR OAK AG SOLUTION
31119 RD 27E
BOX 131
KLEEFELD, MB R0A 0V0

REF # 911669 BOX # 0
LAB # NW26981

Date Sampled 05/31/2014

Date Received 06/06/2014

Date Reported 6/8/2014

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
Nitrate	0-6"	52 lb/ac	Corn-Silage		Corn-Grain		Grass/Alfalfa				
	6-24"	63 lb/ac	YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	115 lb/ac	17 Tons		160 BU		4 Tons				
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
			Broadcast		Broadcast		Broadcast				
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
			N	62	N	77	N	0			
Phosphorus			P ₂ O ₅	0	P ₂ O ₅	0	P ₂ O ₅	0			
Potassium		146 ppm	K ₂ O	79 Broadcast	K ₂ O	62 Broadcast	K ₂ O	0			
			Cl		Cl		Cl				
Chloride			S	0	S	0	S	0			
			B		B		B				
	0-6"	112 lb/ac	Zn	0	Zn	0	Zn	0			
Sulfur	6-24"	132 lb/ac	Fe		Fe		Fe				
Boron			Mn		Mn		Mn				
Zinc		6.59 ppm	Cu	0	Cu	0	Cu	0			
Iron			Mg		Mg		Mg				
Manganese			Lime		Lime		Lime				
Copper		5.53 ppm	Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
Magnesium						% Ca	% Mg	% K	% Na	% H	
Calcium	0-6"	0.34 mmho/cm	0-6" 7.2								
Sodium	6-24"	0.22 mmho/cm	6-24" 7.7								
Org.Matter		3.0 %									
Carbonate(CCE)											
	0-6"										
Sol. Salts	6-24"										

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 61 K2O = 141 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 64 K2O = 43 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.
Crop 3: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 40 K2O = 192 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Report To: 4 Oak Ag Solutions

Grower: SMITH SHEEP

Lot Number: 140730_007

Grower Field Name:

Date Sampled: 2014/07/30

Reference Field Name:

Received Date: 2014/07/30

Legal Location: SE 7-6-7 E1

Date Reported: 2014/07/31

Attention: Marcus Dueck

Total Acres: 160

Client ID: 14-0027

Sampler:

Sample ID	Depth	N ppm	P* ppm	K ppm	S ppm	Ca ppm	Mg ppm	Na ppm	B ppm	Cu ppm	Fe ppm	Mn ppm	Zn ppm	Cl ppm	pH	EC dS/m	OM %
140730_007-01	0-6	<1	15.0	69	3										8.4	0.16	
140730_007-02	6-24	<1			<2												



	N	P	K	S
0-6 lb/Ac:	<2	30	138	6
6-24 lb/Ac:	<6			<12

CEC (meq/100g):
Base Saturation (%):

Ca Base Sat. (%):
K Base Sat. (%):

Mg Base Sat. (%):
Na Base Sat. (%):

Sand (%):

Silt (%):

Clay (%):

Texture:

Total lb/Ac measured:	2	30	138	8
Estimated lb/Ac to 24 inch:	5			17

Lab Comments:

* Bicarbonate-Extractable (Green) Phosphate

Fertility Recommendation

Previous Crop: Grass, Native

☒ Straw Removed

☒ Continuous Cropping

☐ Irrigated

Yield Type	Rain Required (Inch)	Yield	% Yield Reduction	N	P2O5	K2O	S	B	Cu	Fe	Mn	Zn	Cl
Grass, Native													
Calculated Yield	10.1 (Wet)	78 cwt	0	130	20	70	15						
Calculated Yield	7.8 (Average)	59 cwt	0	120	15	50	10						
Calculated Yield	4.8 (Dry)	38 cwt	0	65	15	50	5						

Fertility recommendations are based on spring banding of N, S and seed placement of P, K. Consider total seed row fertilizer with regard to seedling damage.

High nitrogen rates may be more effective as split application.

For forages, P2O5 and K2O recommendations are for broadcast application. For banded or spoke wheel placement, the rate may be reduced by 1/3 to 1/2.

The rate of Phosphorus application is based on seed placement. Broadcasting and incorporation requirement on the average is 2.5 times that of seed placement.

Yields for Green Feed are shown in units of cwt/acre of materials as harvested assuming 25% moisture content. This may be converted to tons/acre by dividing cwt/acre by 20.

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Land Hereafter referred to as "Livestock Operator"
 And: Canada Sheep Land Hereafter referred to as:
☐ "Landowner" or
☐ "Land Renter"

Date: May 15/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and use and regulations supplied to this agreement are provided on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Harvested area (acres)	Area available for spreading (acres exclusive of setbacks and p. 2)	Cropping Instructions	Preferred Application Time
1	NW21 56E	<input checked="" type="checkbox"/>	77	70	Pasture	Fall
2	NW28 56E	<input checked="" type="checkbox"/>	80	80	Rotation	Fall
3	NW28 56E	<input checked="" type="checkbox"/>	150	145	Rotation	Fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates these fields will be available for spreading;
- ☐ agrees to purchase manure (subfert) at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application ☐ Spring ☐ Summer ☒ Fall
- Application method ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
- ☐ Injection ☐ Irrigation/sprinkler

Applicator

- Livestock Operator ☒
- Custom applicator ☐ Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☐ Will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☐ Will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☐ Will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ Will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☐ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the form *Practical Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series*
- ☒ Will provide a proof of calibration for the manure spreading equipment;
- ☒ Will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ Will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ Will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Raymond

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Canada Hayland Hereafter referred to as:
☐ "Landowner" or
☒ "Land Renter"

Date: May 15/04

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of the commercial agreement for agricultural inputs and Agri and regulations implicit to this agreement are provided on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned / Rented	Horizontal size (acres)	Area available for spreading (acres exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
1/2 SE 28 566		<input checked="" type="checkbox"/> Rented	80	67.5	Rotation	July

The Landowner or Land Renter: (Check where applicable/proposed)

☒ I will keep this document and any other related records in file;

☒ I will notify the Livestock Operator of the dates those fields will be available for spreading;

☐ I agree to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;

☒ I will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring

☐ Summer

☒ Fall

Application method

☐ Broadcast

☒ Broadcast and incorporate within 48 hours

☐ Injection

☐ Irrigation/sprinkler

Applicator

Livestock Operator

☒

Custom applicator

☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

☒ I will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;

☒ I will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;

☒ I will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;

☒ I will calculate the manure application rate for each field on the basis of (check only one):

☐ the soil test recommendations for plant nitrogen requirements or

☐ the soil test recommendations for plant phosphorus requirements

☒ general soil fertility recommendations as per the *Soil Fertility Guide* (Manitoba Agriculture and Food) or the *Form Practices Guidelines for Beef/Dairy/Pig/Poultry Producers in Manitoba* series

☒ I will provide a proof of calibration for the manure spreading equipment;

☒ I will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);

☒ I will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;

☒ I will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

114 back

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Conrad Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Conrad Sheep Lamb Hereafter referred to as:
☐ "Landowner" or
☒ "Land Renter"

Date: May 15/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contract agreement for application bylaws and Acts and regulations implicit in this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Estimated size (acres)	Area available for spreading (acres exclusive of obstacles on p. 2)	Cropping Intention	Preferred Application Time
1	<u>SW25 66</u>	<input checked="" type="checkbox"/> Rented	<u>80</u>	<u>75</u>	<u>Relative</u>	<u>Fall</u>
2	<u>SW26 66</u>	<input checked="" type="checkbox"/> Rented	<u>80</u>	<u>80</u>	<u>Relative</u>	<u>Fall</u>

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ Will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring ☐ Summer ☒ Fall

Application method

☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ Will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ Will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ Will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ Will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Pig/Poultry Producers in Manitoba series
- ☒ Will provide a proof of calibration for the manure spreading equipment;
- ☒ Will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ Will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ Will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Zoehel

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Canada Sheep Lamb Hereafter referred to as:
☐ "Landowner" or
☒ "Land Renter"

Date: May 15/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contract agreement for agricultural inputs and farm input regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) (Owned) (Rented)	Acres (approx)	Area available for spreading (Acres including of setbacks see p. 2)	Grassland Intention	Preferred Application Time
1	30227-5-6E	<input checked="" type="checkbox"/>	95	75	Rotation	Fall

The Landowner or Land Renter (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application ☐ Spring ☐ Summer ☒ Fall
- Application method ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
- ☐ Injection ☐ Irrigation/sprinkle

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☐ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Terania

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb

Please print

Hereafter referred to as "Livestock Operator"

And: Canada Sheep Lamb

Please print

Hereafter referred to as:

☐ "Landowner" or
☒ Land Renter
Date: May 15/14The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contract appear for agricultural tenancy and Act and regulations apply to this agreement as provided on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned / Rented	Manure plan (acres)	Area available for spreading (acres exclusive of vehicle and p. 2)	Occupying Interiors	Preferred Application Time
1	NE 21 S 1 E	<input checked="" type="checkbox"/> Rented	160	70	R. 160m	Fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring
 ☐ Summer
 ☒ Fall

Application method

☐ Broadcast
 ☒ Broadcast and incorporate within 48 hours
☐ Injection
 ☐ Irrigation/sprinkler

Applicator

Livestock Operator

☒

Custom applicator

☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
☒ will calculate the manure application rate for each field on the basis of (check only one):
☐ the soil test recommendations for plant nitrogen requirements or
☐ the soil test recommendations for plant phosphorus requirements
☒ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practice Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
☒ will provide a proof of calibration for the manure spreading equipment;
☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
☒ will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Harlan

And:

Please print
Robert Hunter

Please print.

Hereafter referred to as:

☒ "Landowner" or 'Land Rover'

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Land Parcels selected as potential fields to receive manure

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Field Application Details

Time of Application

Application method

- ☐ Spring ☐ Summer ☒ Fall
- ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
- ☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator

Custom applicator

Name of applicator:

Anticipated Manure Application Starting Date:

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☐ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the *Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series*
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

De Jong

Ande

Please print
Peter De Jong
Please print

Please print



Signature _____

Hereafter referred to as:

☐ "Land Renter"

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Land Parcels selected as potential fields to receive manure

The Landowner or Land Renter: (Check where applicable/proposed)

- ### Responsibilities of the Livestock Operator

Time of Application

- ☐ Spring ☐ Summer ☒ Fall
- ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
- ☐ Injection ☐ Irrigation/sprinkler

Livestock Operator

Custom applicator

Anticipated Mar

00

Name of applicator:

Anticipated Manure Application Starting Date:

☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Repter.

- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the *Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series*
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Chornoby, Isaac Schmidt

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Joyce Chornoby Hereafter referred to as:
☒ "Landowner" or
☐ "Land Renter"

Date: May 15/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contract agreement for agricultural inputs and Acts and regulations specific to this agreement are provided on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Manure rate (tons)	Area available for spreading (acres exclusive of sublots no. 2)	Cropping Intention	Preferred Application Time
1	SW21566	<input checked="" type="checkbox"/> <input type="checkbox"/>	120	90	Hay	Fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates those fields will be available for spreadings;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application: ☐ Spring ☐ Summer ☒ Fall
- Application method: ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

434-9516 Weins

LIVESTOCK MANURE SPREADING AGREEMENTBetween: Sarah Shep
Please print[Signature]
Signature

Hereafter referred to as "Livestock Operator"

And: Cornie Weins
Please print[Signature]
Signature

Hereafter referred to as:

☒ "Landowner" or☐ "Land Renter"Date: Mar 18/14The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Nominal size (acres)	Area available for spreading (acres; exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
	<u>NE 1/4 S 6E</u>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<u>160</u>	<u>155</u>	<u>hay</u>	

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☒ agrees to purchase manure nutrient at a rate of \$ 0 per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring☐ Summer☒ Fall

Application method

☐ Broadcast☐ Broadcast and incorporate within 48 hours☐ Injection☐ Irrigation/sprinkler

Applicator

Livestock Operator

☒

Custom applicator

☐

Name of applicator: _____

Anticipated Manure Application Starting Date: Oct 1

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
- ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

LIVESTOCK MANURE SPREADING AGREEMENT Duster

Between: Canada Sheep Lamb

Please print

Signature

Hereafter referred to as "Livestock Operator"

And: D.P. Wiebe and Son Ltd.

Please print

Signature

Hereafter referred to as:

☒ "Landowner" or

☐ "Land Renter"

Date: May 23 2014

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Nominal size (acres)	Area available for spreading (acres; exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
1	SW 32-5-62	<input checked="" type="checkbox"/>	80	65	Soybeans/Barley	Fall
2	SW 33-5-62	<input checked="" type="checkbox"/>	80	75	Soybeans/Barley	Fall
3	RL 57440	<input checked="" type="checkbox"/>	250	250	Soybeans/Barley	Fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring ☐ Summer ☒ Fall

Application method

☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Nico

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Runkowsky Hereafter referred to as:
 Please print Signature ☒ "Landowner" or
 Please print Signature ☐ "Land Renter"

Date: _____

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contract agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Nominal size (acres)	Area available for spreading (acres exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
	<u>SE 27-5-6E</u>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<u>7.8</u>	<u>50</u>	<u>Hay</u>	
		<input type="checkbox"/> <input type="checkbox"/>				
		<input type="checkbox"/> <input type="checkbox"/>				

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application ☐ Spring ☐ Summer ☒ Fall
- Application method ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒
 Custom applicator ☐ Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Doug Choroboy

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb *[Signature]* Hereafter referred to as "Livestock Operator"
 And: Doug Choroboy *[Signature]* Hereafter referred to as:
☒ "Landowner" or
☐ "Land Renter"

Date: MAY 10/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned | Rented	Nominal size (acres)	Area available for spreading (acres exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
	SE17-5-62	<input checked="" type="checkbox"/> <input type="checkbox"/>	70	70	CORN	Fall
		<input type="checkbox"/> <input type="checkbox"/>				
		<input type="checkbox"/> <input type="checkbox"/>				

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ Agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ Will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application: ☐ Spring ☐ Summer ☒ Fall
- Application method: ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒ ☐ Custom applicator ☐ Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ Will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ Will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ Will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ Will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ Will provide a proof of calibration for the manure spreading equipment;
- ☒ Will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ Will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ Will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

434-6

LIVESTOCK MANURE SPREADING AGREEMENT

Between:

Canada Sheep Lamb

Hereafter referred to as "Livestock Operator"

And:

FRANK Friesen

Hereafter referred to as:

☒ "Landowner" or☐ "Land Renter"

Date:

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned | Rented	Nominal size (acres)	Area available for spreading (acres; exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
1	5/4 NE 27-5-56	<input checked="" type="checkbox"/> Owned	20	50	corn silage	fall
2	N 24 27 5 56	<input checked="" type="checkbox"/> Owned	20	20	hay	fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring ☐ Summer ☒ Fall

Application method

☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
- ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

Ab Braun

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Ab Braun Hereafter referred to as:
☒ "Landowner" or
☐ "Land Renter"

Date: May 23/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of sale contractual agreement for agricultural inputs and Acts and regulations in force in this agreement are provided on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Cropped / Barren	Manure rate (tonne)	Area available for spreading (acres exclusive of roads and p. 2)	Cropping Intention	Preferred Application Time
1	NW12-5-66	<input checked="" type="checkbox"/> Cropped	160	150	Corn/Barren	fall

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ Will keep this document and any other related records in his files;
- ☒ Will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (injection).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application: ☐ Spring ☐ Summer ☒ Fall
- Application method: ☐ Broadcast ☒ Broadcast and incorporate within 48 hours
☐ Injection ☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ Will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ Will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ Will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ Will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☐ the soil test recommendations for plant phosphorus requirements
 - ☒ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Goat/Hog/Poultry Producers in Manitoba series
- ☒ Will provide a proof of calibration for the manure spreading equipment;
- ☒ Will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☐ Will have a manure management plan prepared by a professional agronomist, along with field map(s) highlighting setbacks to observe;
- ☒ Will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Canada Sheep Lamb Hereafter referred to as "Livestock Operator"
 And: Randy Biddle Hereafter referred to as:
 Please print Signature ☒ "Landowner" or
 Please print Signature ☐ "Land Renter"

Date: July 27/14

The duration of this agreement is of 5 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one) Owned Rented	Nominal size (acres)	Area available for spreading (acres; exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
	<u>SE 1-6-7E</u>	<input checked="" type="checkbox"/>	<u>160</u>	<u>160</u>		<u>Fall</u>
	<u>NE 2-5-7E</u>		<u>160</u>	<u>90</u>		

The Landowner or Land Renter: (Check where applicable/proposed)

- ☒ will keep this document and any other related records in his files;
- ☒ will notify the Livestock Operator of the dates those fields will be available for spreading;
- ☐ agrees to purchase manure nutrient at a rate of \$ _____ per ☐ 1000 gal or ☐ tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- ☒ will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

Time of Application

☐ Spring

☐ Summer

☒ Fall

Application method

☐ Broadcast

☒ Broadcast and incorporate within 48 hours

☐ Injection

☐ Irrigation/sprinkler

Applicator

Livestock Operator ☒

Custom applicator ☐

Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- ☒ will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- ☒ will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- ☒ will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- ☒ will calculate the manure application rate for each field on the basis of (check only one):
 - ☐ the soil test recommendations for plant nitrogen requirements or
 - ☒ the soil test recommendations for plant phosphorus requirements
 - ☐ general soil fertility recommendations as per the Soil Fertility Guide (Manitoba Agriculture and Food) or the Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba series
- ☒ will provide a proof of calibration for the manure spreading equipment;
- ☒ will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- ☒ will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- ☒ will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Alfalfa Hay	400	2.423	ton/acre	MMMP Variety Yield Data
Corn Silage	320	4.07	ton/acre	MMMP Variety Yield Data
Soybeans	320	32.6	bu/acre	MMMP Variety Yield Data
Corn Grain	192	95.8	bu/acre	MMMP Variety Yield Data
Grass Hay	200			
Total Net Acreage for Manure Application	1432 acres			

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 280. 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 NASS data (<http://www.nass.usda.gov/cropland/ind/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.

In "*certain areas*" it is Manitoba Conservation and Water Stewardship policy to consider a manure storage facility permit if the operation shows it has access to sufficient suitable land to apply manure at a rate equivalent to one times the crop removal rate of phosphorus.

Is the livestock operation located in "*certain areas*"?

☒ yes ☐ no

In areas which are not considered to be "*certain areas*", Manitoba Conservation and Water Stewardship may issue a manure storage facility permit, if the operation shows it has access to sufficient suitable land to apply manure at a rate equivalent to two times the crop removal rate of phosphorus.

For more information on obtaining a manure storage facility permit, please contact Manitoba Conservation and Water Stewardship, Environmental Approvals branch at (204) 945-5081.

Use the [Land Base Calculator](#) to calculate the minimum area required for manure application.

Total minimum area required for manure application at two times crop removal, for operations outside of Hanover and La Broquerie	534 acres
Total minimum area required for manure application at one times crop removal, for operations within Hanover and La Broquerie AND For the long-term sustainability of operations outside of Hanover and La Broquerie	1 068 acres

For more information on completing land base calculations, call Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at (204) 945-3869 in Winnipeg.

☒ Land Base Calculator attached

Land Base Requirement Summary

By comparing the land available for manure application with the land required for manure application, state whether sufficient suitable land for manure application:

- ☐ has not been identified
- ☐ has been identified for two times the crop removal rate of phosphorus (for operations outside of the RMs of Hanover or La Broquerie)
- ☒ has been identified for one times the crop removal rate of phosphorus (for operations within the RMs of Hanover and La Broquerie)

Sheep/Operation Type	Storage Type	Volatilization	Animal Numbers	Weight In lb	Weight Out lb	Ave Weight lb	Days on Feed	Cycles per Year	N Excreted Per Sheep Place kg/yr	N Excreted Per Flock kg/yr	Adjusted for Loss N kg/yr	N Excreted per Flock adjusted for Loss lb/flock/yr	P2O5 Excreted Per Flock lb/flock/yr
Ewes	Field Storage	40%	4000	120	170	145	365	1	10.80	43204	25922	57159	34084
Replacement Ewes	Field Storage	40%	0	45	80	83	210	1	2.88	0	0	0	0
Rams	Field Storage	40%	55	100	200	150	365	1	11.17	615	359	813	485
Lambs	Field Storage	40%	2150	8	45	27	365*	1	1.97	4244	2545	5615	3348
Ewes, plus assoc livestock	Field Storage	40%	0	na	na	na	na	na	13.09	0	0	0	0
Feeder	Field Storage	40%	0	45	100	73	365	1	9.40	0	0	0	0

*Lambs are generally weaned at 50 days, and and finished on feed to market within about 150 days.

Species	Animal Category/Operation type	N (lb/year)	P205 (lb/year)
Pigs	Gestating Sow	0	0
	Nursing Sow	0	0
	Gilts	0	0
	Boars	0	0
	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
	Weanlings	0	0
	Growers/finishers	0	0
Beef	Cows	0	0
	Bred Heifers	0	0
	Calves	0	0
	Bulls	0	0
	Cows, plus associated livestock	0	0
	Feedlot Cattle - grain based diet	0	0
	Pasture Cattle	0	0
	Backgrounders	0	0
Dairy	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
Sheep	Ewes	57159	34084
	Replacement Ewes	0	0
	Rams	813	485
	Lambs	5615	3348
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
Chickens	Broilers	0	0
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	Layer Pullets	0	0
	Layer Hens	0	0
	Breeder Pullets	0	0
	Breeder Hens	0	0
Turkeys	Broiler Hens (0-9 wks)	0	0
	Hens (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Light Toms (0-12 wks)	0	0
	Toms (0-13 wks)	0	0
	Heavy Toms (0-15 wks)	0	0
	Breeding Hen Growers (0-30 wks)	0	0
	Breeding Hens (30-60 wks)	0	0
	Breeding Tom Grower (0-18 wks)	0	0
	Breeding Tom Grower (0-30 wks)	0	0
	Breeding Tom (30-60 wks)	0	0
Total		63587	37917

Note: Be sure all livestock species on your farm are represented in this table. Not just the proposed expansion.

Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake	
	P2O5	N	N	Units				P2O5	N	P2O5	N
	(lb)	(lb)	(lb)					(lb)	(lb)	(lb)	(lb)
Alfalfa	13.8	58	58	lb/ton	2.923	ton/ac	400	16135	67814	67814	
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-	-
Canola	1.04	1.93	3.19	lb/bu		bu/ac		-	-	-	-
Corn Grain	0.44	0.97	1.53	lb/bu	88	bu/ac	320	12390	27315	43085	
Corn Silage	12.7	31.2	31.2	lb/ton	3.458	tons/ac	320	14053	34525	34525	
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	1.871	tons/ac	192	3592	12286	12286	
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	27.7	bu/ac	200	4654	21440	28808	
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu		bu/ac		-	-	-	-
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-	-
Sub Total							1432	50825	163379	186517	
Removal (lb/ac)								35.5	114	130	
Additional Acres							230				
Total Suitable Acres Available for Manure							1662				

MASC yields in Hanover for soil zones H and I

Nutrients Excreted		lbs
Nitrogen		63587
P2O5		37917
Crop Nutrient Use		lb/ac
Nitrogen Uptake		130.2
P2O5 Removal		35.5
Land Base Requirements		acres
Acres Available		1662
Acres for Nitrogen Uptake		488
Acres for 2 x P2O5 Removal		534
Acres for 1 x P2O5 Removal		1068

Long-Term Environmental Sustainability

The Government of Manitoba has included phosphorus as a nutrient by which applications of manure, synthetic fertilizer and municipal waste sludge to agricultural lands may be limited.

Over the short-term for fields with low phosphorus, regulations allow manure to be applied to meet the nitrogen requirements of the crop. This often results in over-application of phosphorus and a build-up of phosphorus in soils. When soil test phosphorus levels reach 60 ppm Olsen P, manure application rates must consider how much phosphorus will be removed in the harvested portion of the crop. At 60 to 119 ppm Olsen P, the amount of phosphorus that can be applied cannot exceed twice (two times) what the crop can remove in order to slow the build-up of soil phosphorus. Once soil test phosphorus levels reach 120 ppm Olsen P, applications of phosphorus are restricted to no more than what the crop can remove (one times) in order to stop further soil test phosphorus build-up. At 180 ppm Olsen P, no additional phosphorus may be applied.

It should be noted that soil-test phosphorus levels of 60 ppm Olsen P or greater are agronomically very high and at these levels most crops will not benefit from additional phosphorus beyond starter phosphorus. As phosphorus levels build up in soils, the concentration of phosphorus in runoff increases.

Therefore, to remain environmentally sustainable over a long-term planning horizon of 25 years or more, phosphorus applications from applied manure and other nutrient sources such as commercial fertilizers must be balanced with crop removal to avoid further build-up in soils. Consequently, sufficient land must be available in relatively close proximity to the operation to balance phosphorus applications with crop phosphorus removals (one times) so that manure treatment and export of phosphorus from the region is not required.

☒ I acknowledge that up to 1 068 acres acres/hectares (one times crop removal from table above) may be required for the long term environmental sustainability of the operation.

10.0 Mortalities (Dead Animal) Disposal

The Livestock Manure and Mortalities Management Regulation sets requirements for the use, management and storage of livestock mortalities in agricultural operations. It helps ensure livestock mortalities are handled in an environmentally sound manner. Winter application of composted mortalities is prohibited.

Type of disposal: ☐ rendering
☒ composting
☐ incineration (in approved incinerator only)

Mass Mortalities

☐ A plan for mass mortalities is in place.

What steps will be taken in the case of mass mortalities?

Given the soil properties and groundwater conditions at the site, burial of mass mortalities is not advisable. In the event of mass mortalities, dead stock will be hauled to a suitable landfill identified by Manitoba Conservation.

11.0 Project Site Description: Land Use Planning Considerations

For assistance contact your Community and Regional Planning Regional Office.

Development Plan and Zoning Bylaw

The Planning District or Municipal Development Plan and Zoning By-law adopted under The Planning Act, set policy and regulations for the use and development of land. A proposed livestock operation must comply with the requirements of this bylaw. In the absence of a By-law, the Provincial Planning Regulation under The Planning Act applies.

Development Plan

Every Development Plan must contain a livestock operation policy (LOP) that identifies areas where new or expanded livestock operations may be allowed. It must also set general standards for the location and setback of livestock operations. Identifying the Development Plan's land use designation and policies (for the planning district or municipality that affect the site) will help confirm the project site's compliance. The Development Plan designations for the spread fields (if something other than agricultural) will indicate the potential loss of the fields in the future due to possible development.

Name of Planning District	RM of Hanover
Development Plan by-law number	no. 2170
Land use designation of project site	Rural Area
Livestock operation policies – quote supportive policy numbers	2.3 - Goal 9
Other Development Plan policies – quote supportive policy numbers	3.2.4
Non-supportive Development Plan policies	

☒ The Development Plan livestock operation policies support the size and location of the proposed operation.

☒ The Development Plan designations support the long term use of the proposed spread fields.

Zoning By-law

Identifying the zoning for the project site, the proposed spread fields and the related zoning provisions, helps determine the project's compliance and the minimum separation distances needed between the operation and property boundaries and other natural features and land uses. The zoning bylaw contains specific regulations that govern location and setback of livestock operations.

What are the minimum project site requirements stated in the Zoning By-law?

	Project site dimensions	Minimum zoning bylaw site requirements
Minimum site area	80 ac	160 ac unless existing
Minimum site width	1320 ft	1000 ft
Minimum front yard	~ 500 ft	164 ft
Minimum side and rear yard	328 ft	164 ft

If any project (front, side or rear) yard site dimensions are less than the Zoning By-law minimum, a Variation Order from the Municipality will be required.

Separation Distances (Zoning Bylaw or Provincial Planning Regulation) ?

Using the proposed size of the operation (see [Animal Units Calculation Table](#)) and the type of animal housing and manure storage facility, complete the following table.

Indicate the distance from:

- a. earthen manure storage facility or b. feedlot and
c. animal confinement facility or d. non-earthen manure storage facility...

...to the following land use features (if applicable)	Indicate minimum separation distance required in the zoning bylaw or Provincial Planning Regulation (Check appropriate box(es))		If land use feature is less than the minimum separation distance	
	<input type="checkbox"/> a. <input checked="" type="checkbox"/> b.	<input checked="" type="checkbox"/> c. <input type="checkbox"/> d.	Provide actual distance	Provide location or name of feature (e.g. Red River)
Residence/dwelling	820 ft	820 ft	~ 944 ft	W $\frac{1}{2}$ NW21-5-6E
<u>Designated area</u> (non-agricultural) ?	4364 ft	4364 ft	~ 5000 ft	Sarto, MB
Surface water	328 ft	328 ft	328 ft	Tourond Creek
Surface watercourse	328 ft	328 ft	328 ft	Tourond Creek
Crown land				none in vicinity
Wildlife Management Area				none in vicinity
Livestock operation			~944 ft	Beef operation @ W $\frac{1}{2}$ NW21-5-6E
Other significant features/land uses				

If Crown Lands are located within one mile, provide coding. Information can be obtained from the Interdepartmental Operations Crown Lands Plans through the [Manitoba Legislative Library](#) or contact Manitoba Conservation and Water Stewardship at (204) 619-2230.

If undesignated Crown Lands will be used for manure spreading purposes, including the laying of pipe or clearing activity, and use will require a Crown Lands General Permit disposition for the use and access of the subject Crown Lands Parcel(s). ?

In cases where minimum separation distances are not stated in the Zoning By-law or Development Plan, the minimum separation distances in the [Provincial Planning Regulation](#) apply.

Note: If any separation distance is less than the zoning by-law minimum, a Variation Order will be required from the Municipality.

Setback Distances (Livestock Manure and Mortalities Management Regulation)

Using the following table to indicate the distance from:

Feature	Structure	Minimum setback distance required	Provide actual distance (m)	Provide location or name of feature (e.g. Red River)
Surface watercourse, sinkhole, spring, or well	Manure storage facility	100 m	n/a	
	Field storage	100 m	> 100 m	locations vary yearly
	Composting site	100 m	200 m	Tourond Creek
	Confined livestock area	100 m	100 m	Tourond Creek
Property Line	Manure storage facility	100 m	n/a	
	Composting site	100 m	185 m	West property line
	Confined livestock area	100 m	100 m	West property line

If any setback distances have not been met, please provide explanation below:

Show: a) location of the project site, location and ownership of spread fields and b) land uses and significant features including dwellings (i) within a 1 mile radius of the project site and (ii) within and adjacent to each spread field on a Land Use & Spread Field Map. (See [Land Use & Spread Field Map Example](#)). ?

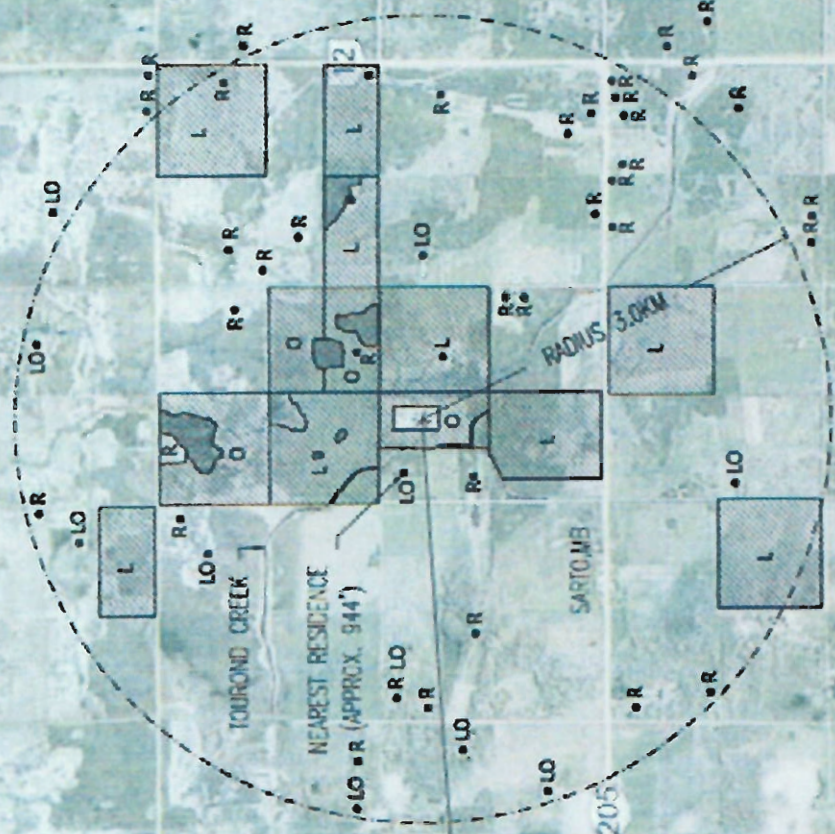


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LEGEND:

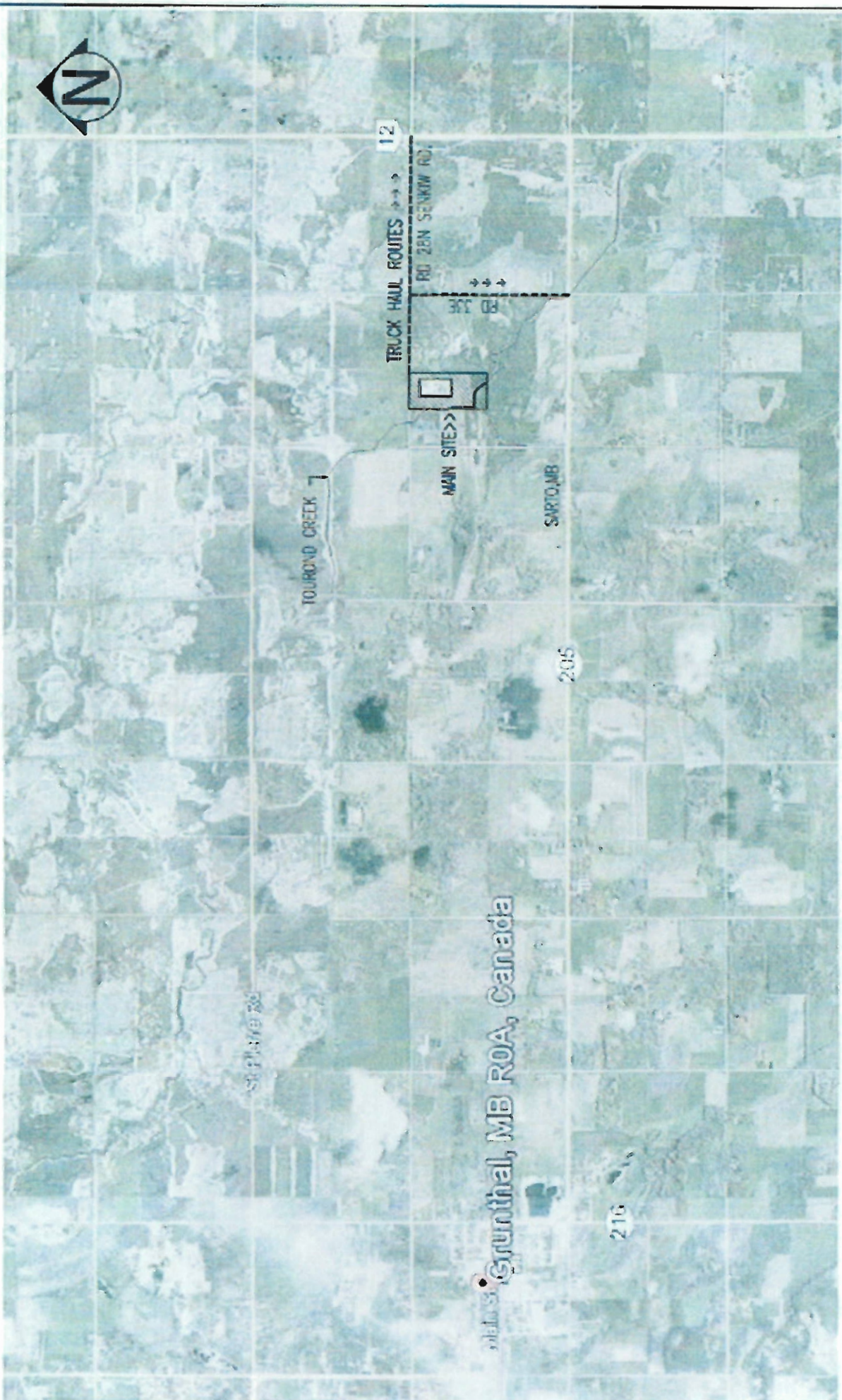
- LO - LIVESTOCK OPERATIONS
- O - SPREAD FIELDS (OWNED)
- L - LEASED/AGREEMENT
- R - RESIDENCE
- 3km NOTIFICATION AREA FOR THE PUBLIC CONDITIONAL USE HEARING

South-Man Engineering

JAN 18 10:59 CDS/SLD 1040
MANITOBA, CANADA
431 210

PROJECT NAME	CANADA SHEEP & LAMB - SARTO	MAPING DATE	N/A
FIELD DATA	LAND USE & SPREAD FIELD MAP E 1/2 NW 21-5-6E	DRAWN BY	R. FLORES SOUTH-MAN ENGINEERING
DATE DRAWN	FEBRUARY 2014	DRAWING SCALE	N.T.S.
		SHEET NUMBER	SP-2

THIS DRAWING IS THE PROPERTY OF SOUTH-MAN ENGINEERING, WINNIPEG, MANITOBA, CANADA.



Grunthal, MB ROA, Canada

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WE SERVE THE
MANITOBA PROVINCE
AND THE GREAT WESTERN
AREA

PROJECT NAME
CANADA SHEEP & LAMB - SARTO

SHEET TITLE
**TRUCK HAUL ROUTE
E & HWY 21-5-GE**

DATE
FEBRUARY 2024

DESIGNED BY
R. FLORES

DRAWN BY
SOUTH-MAN ENGINEERING

SCALE
N.T.S.

SHEET NAME
SP-3

THIS DRAWING IS THE PROPERTY OF SOUTH-MAN ENGINEERING, WINNIPEG, MANITOBA, CANADA.

Peter Grieger <peter.southmaneng@gmail.com>

Canada Sheep & Lamb Farms Ltd.

Friesen, Chris (CWS) <Chris.Friesen@gov.mb.ca>

Fri, Jun 27, 2014 at 1:19 PM

To: "peter@southmaneng.com" <peter@southmaneng.com>

Peter

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's rare species database and found no occurrences at this time for your area of interest.

The information provided in this letter is based on existing data known to the Manitoba Conservation Data Centre at the time of the request. These data are dependent on the research and observations of CDC staff and others who have shared their data, and reflect our current state of knowledge. An absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present; in many areas, comprehensive surveys have never been completed. Therefore, this information should be regarded neither as a final statement on the occurrence of any species of concern, nor as a substitute for on-site surveys for species as part of environmental assessments.

Because the Manitoba CDC's 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 pass before it is utilized.

Third party requests for products wholly or partially derived from Biotics 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 Biotics data, as follows as: Data developed by the Manitoba Conservation Data Centre; Wildlife Branch, Manitoba Conservation and Water Stewardship.

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 please contact me directly at (204) 945-7747.

Chris Friesen
Biodiversity Information Manager
Manitoba Conservation Data Centre
204-945-7747
chris.friesen@gov.mb.ca
<http://www.gov.mb.ca/conservation/cdc/>

-----Original Message-----

From:
Sent: June-25-14 3:13 PM
To: Friesen, Chris (CWS)
Subject: WWW Form Submission

Below is the result of your feedback form. It was submitted by WWW Information Request () on Wednesday, June 25, 2014 at 20:12:51

DocumentID: Manitoba_Conservation

Project Title: Canada Sheep & Lamb Farms Ltd.

Date Needed: June 27, 2014

Name: Peter Grieger

Company/Organization: South-Man Engineering

Address: Unit 15 - 1599 Dugald Road

City: Winnipeg

Province/State: Manitoba

Phone: (204) 668-9652

Fax: (204) 668-9204

Email: peter@southmaneng.com

Project Description: Project involves the expansion of an existing livestock operation (sheep) contained within housing and penning facilities as opposed to free range. Information received will be used to evaluate the impact of the operation on rare or endangered species.

Information Requested: Would like to identify the presence of any rare or endangered species which may be impacted by confined livestock within the area.

Format Requested: Microsoft Word Document preferred via email.

Location: Location E 1/2 of NW 21-5-6E in the RM of Hanover.

Action: Submit

12.0 Truck Haul Routes and Access Points ?

One consideration with new or expanding livestock operations is the potential impact on existing public roads (municipal and provincial), access and the need for improvements or mitigation. Complete the following table.

Vehicle Type	Estimated Average Number of times per day accessing		Access from PTH/PR onto site will mainly require a Left or Right Hand Turn Please check one				Access onto PTH/PR from site will mainly require a Left or Right Hand Turn Please check one			
	Provincial Trunk Highway (PTH)	Provincial Road (PR)	Provincial Trunk Highway (PTH)		Provincial Road (PR)		Provincial Trunk Highway (PTH)		Provincial Road (PR)	
			LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
Truck										
Tractor Trailer		1				X			X	
Other – Specify (passenger vehicles)		6			X	X			X	X

Identify what roads and access points will be used for the proposed operation? (See [Truck Haul Routes and Access Points Map](#) for an example).

For help with mapping, contact your [Community and Regional Planning Regional Office](#).

☒ Truck Haul Routes and Access Points Map attached

13.0 Conservation Data Centre Report

A Conservation Data Centre Report must be requested and the response attached to this site assessment. The request may be submitted electronically at:

www.gov.mb.ca/conservation/cdc

Were rare species identified in the Conservation Data Centre Report?

☐ Yes

☐ No

14.0 Supporting Documents

Check off the supporting documents included in this submission:

- ☒ Contact Information and Privacy and Publication Notice
- ☒ Location Map (shows proposed project within rural municipality)
- ☒ Animal Units Calculation Table
- ☒ Water Requirement Calculation Table
- ☐ Manure Production Calculator Table N/A
- ☒ Existing and Proposed Manure Storage Facility Dimensions Tables
(if applicable) *Estimated from existing*
- ☒ Manure Application Field Characteristics Table
- ☒ Crop Rotation Table
- ☒ Recent manure application field soil sample results (Nitrate- N lb/ac at 0-6 and 6-24 inch depths, Phosphorus – ppm at 0-6 inch depth)
- ☒ Land Base Calculator
- ☒ Project Site Plan (proposed operation showing current and proposed structures)
- ☒ Land Use and Spread Field Map (location and ownership of operation, spread fields, location and distance to non-agricultural uses, development plan designation, zoning for project site and spread fields)
- ☒ Truck Haul Routes and Access Points Map (with routes and access points on municipal/provincial roads and/or provincial trunk highways)
- ☒ Response from the Conservation Data Centre
- ☐ Other, please specify:

15.0 Declaration

I do hereby verify that the information contained in the Site Assessment and all required Supporting Documents is accurate and complete to my knowledge

Date: Oct 1/14

Signature: *PK Ag*