

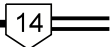

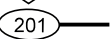
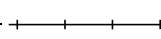
MUNICIPALITY OF RHINELAND

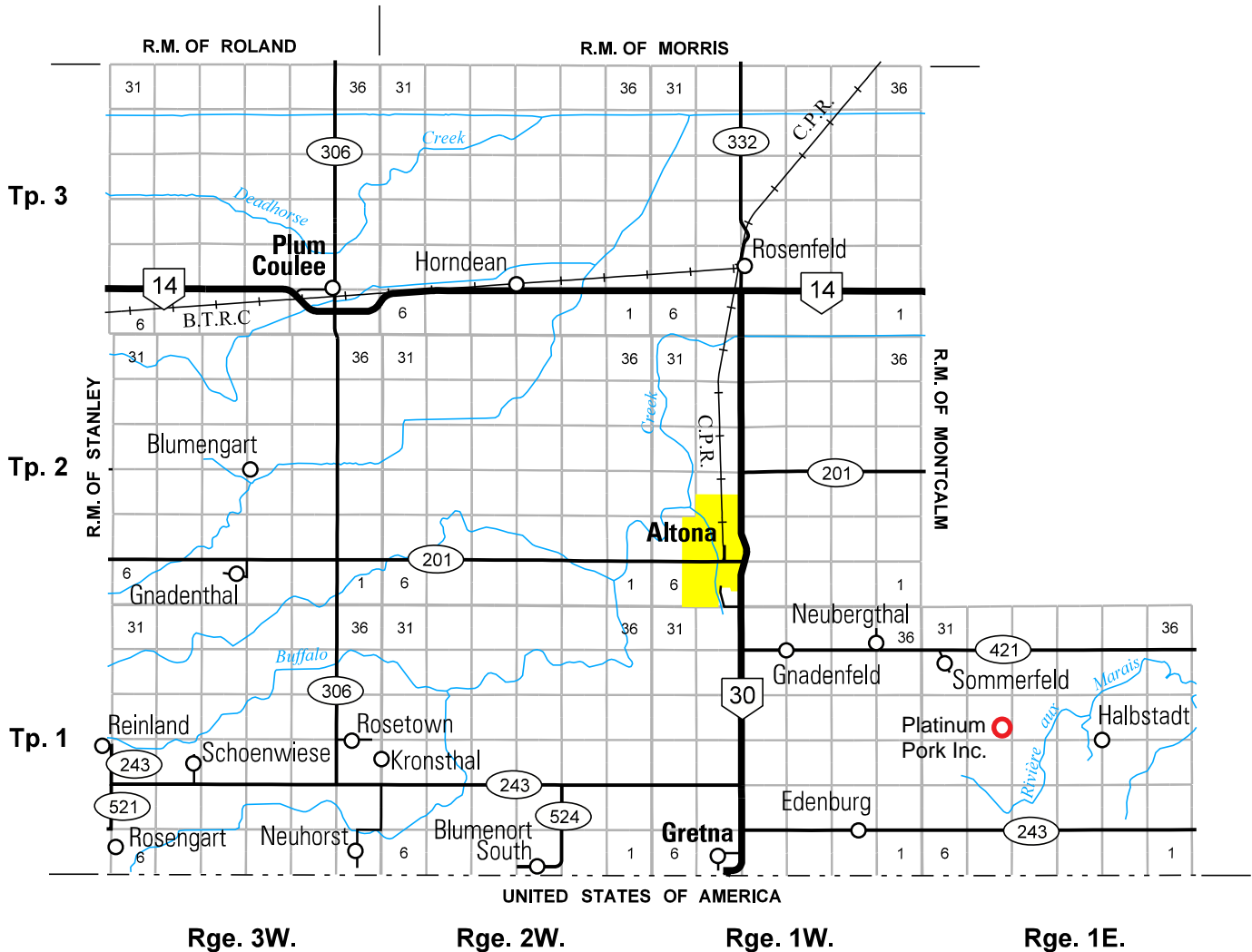


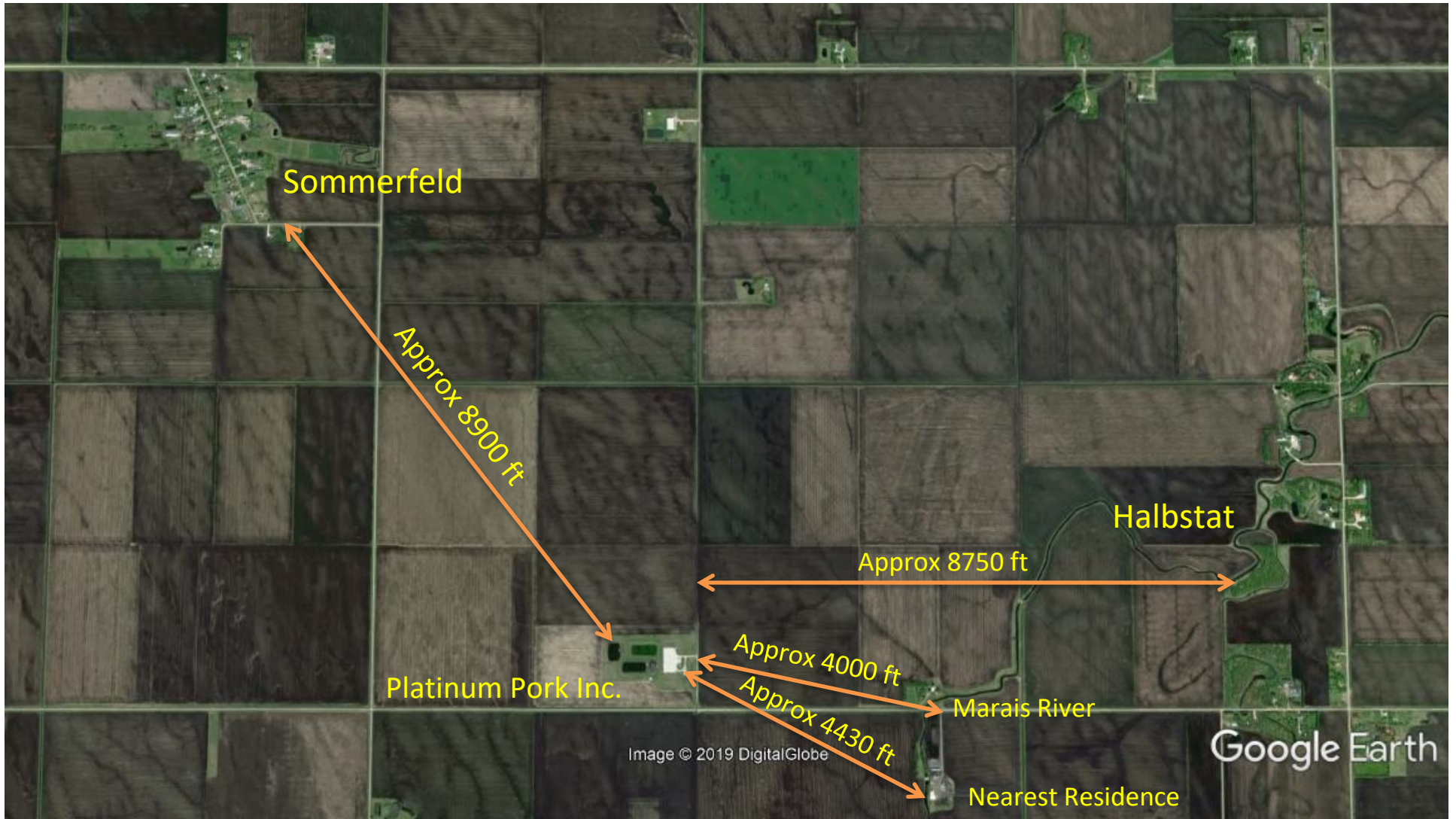
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SCALE IN KILOMETRES

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

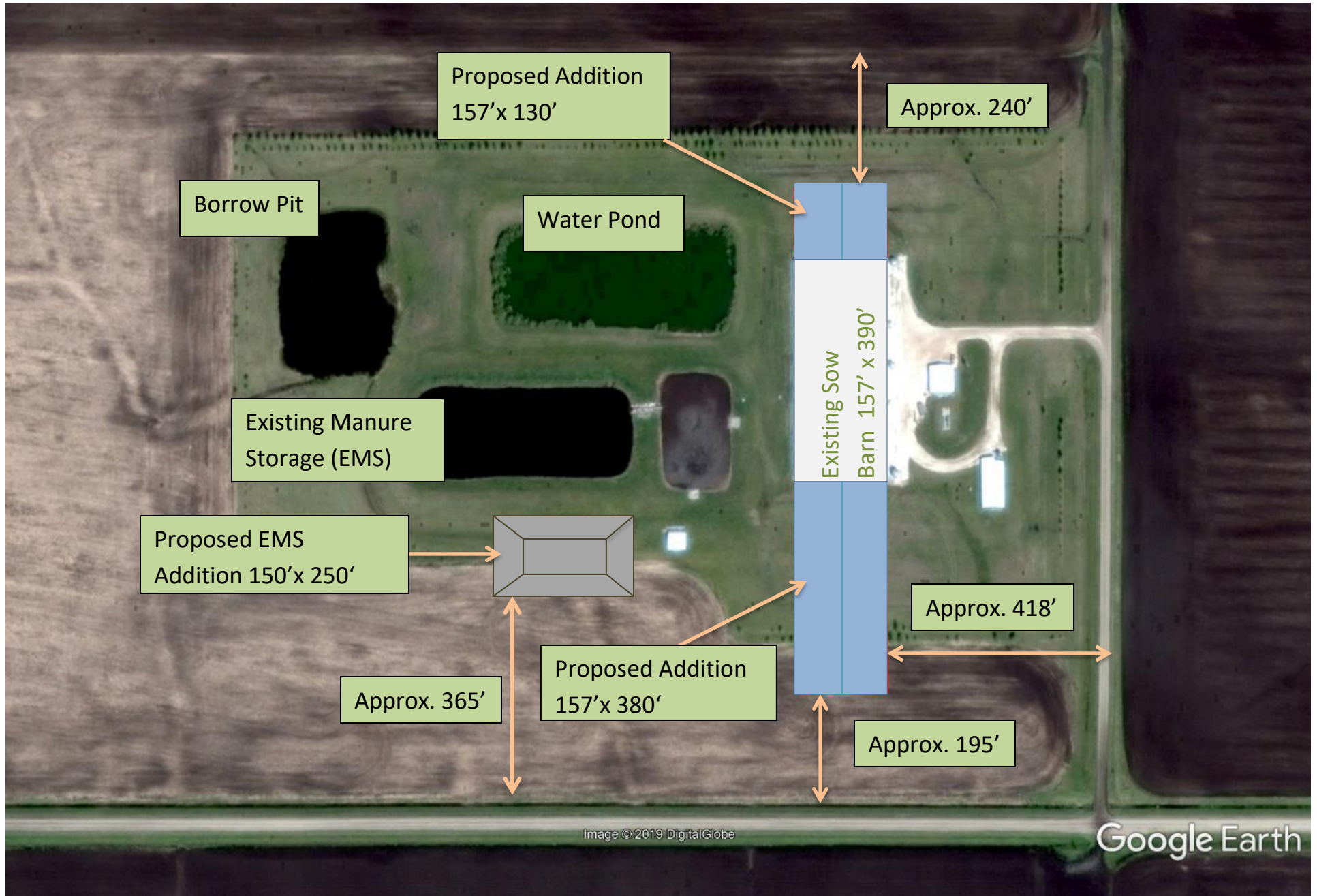
LEGEND

PROVINCIAL TRUNK HIGHWAYS  ACCESS ROADS 
PROVINCIAL ROADS  RAILWAYS 





Platinum Pork Inc. Setback Distances



Platinum Pork Inc. Site Plan

Animal Units Calculator

A	B	C	Current Operation		Proposed Operation	
			D	E	F	G
Operation Type	Animal Categories	Animal Units per Head	Current Number of Animals ¹	Current Animal Units	Proposed Number of Animals ²	Proposed Number of Animal Units
Dairy ³	Mature cows (lactating and dry) including associated livestock	2		-		-
	Mature cows (lactating and dry)	1.35		-		-
	Heifers (0 to 3 months)	0.16		-		-
	Heifers (4 to 13 months)	0.41		-		-
	Heifers (> 13 months)	0.87		-		-
	Bulls	1.35		-		-
	Veal calves	0.13		-		-
Beef	Beef cows including associated livestock	1.25		-		-
	Backgrounder	0.5		-		-
	Summer pasture / replacement heifers	0.625		-		-
	Feeder cattle	0.769		-		-
Pigs	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weanling (up to 11 lbs)	0.25	1,800	450	3,600	900
	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	70	10	140	20
Chickens	Broilers	0.005		-		-
	Roasters	0.01		-		-
	Layers	0.0083		-		-
	Pullets	0.0033		-		-
	Broiler breeder pullets	0.0033		-		-
	Broiler breeder hens	0.01		-		-
Turkeys	Broilers	0.01		-		-
	Heavy Toms	0.02		-		-
	Heavy Hens	0.01		-		-
Horses	Mares	1.333		-		-
Sheep	Ewes	0.2		-		-
	Feeder lambs	0.063		-		-
Other Livestock	Type:			-		-
	Type:			-		-
Total Current:				460	Total Proposed:	920

Footnotes:

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

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

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



Water Requirement Calculation Table

Livestock	Number	IG/day per animal in winter	IG/day per animal in summer	IG/day (Imperial gallons per day)
Beef/Dairy/Bison *				
Feeder/heifer/steer (600 lb.)		5	9	-
Feeder (900 lb.)		7	12	-
Feeder (1250 lb.)		10	15	-
Cow/calf pair		12	15	-
Dry milking cow **		10	12	-
Lactating cow **		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)	3,600		6.5	23,400
Dry Sow/Boar			4	-
Feeder	140		3	420
Nursery (33 lb.)			2	-
Chickens				
Broilers			0.035	-
Roasters/Pullets			0.04	-
Layers			0.055	-
Breeders			0.07	-
Turkeys				
Turkey Growers			0.13	-
Turkey Heavies			0.16	-
Sheep/Goats				
Sheep/Goats			2	-
Ewes/Does			3	-
Lambs/Kids (90 lb.)			1.6	-
TOTAL (IG/day)				23,820
*** TOTAL with 10% wash water				26,202

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

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

Enter this number on page 7 of Application Form.

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

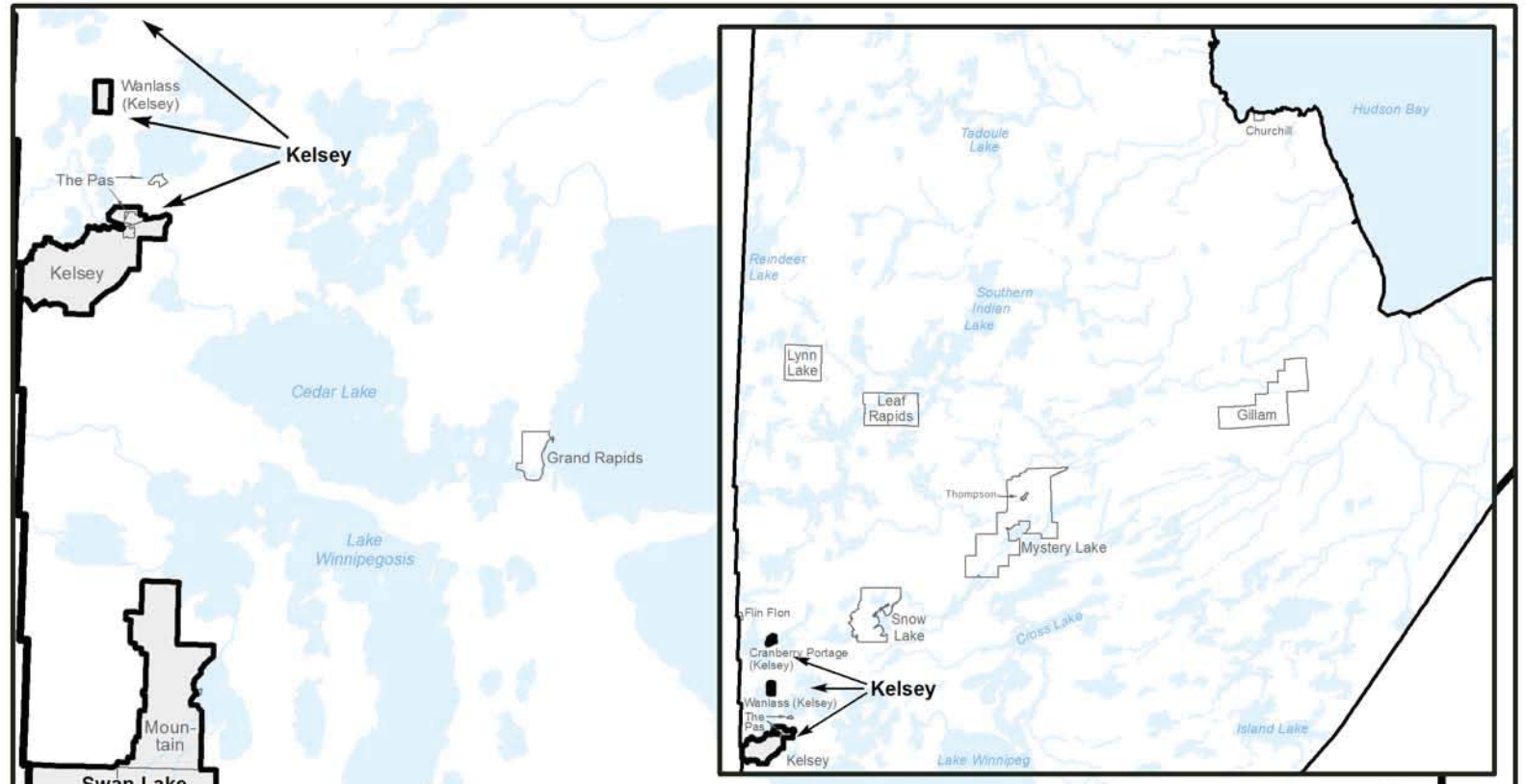
Other consumption:
Normal household consumption:
60-75 IG/day per person or
(272-340 l/day/person)

Unit Conversions		
Total per day	Total per year	Unit
26,202	9,563,730	IG
108,286	39,524,288	litres
0.108	40	cubic decametres (dam ³)

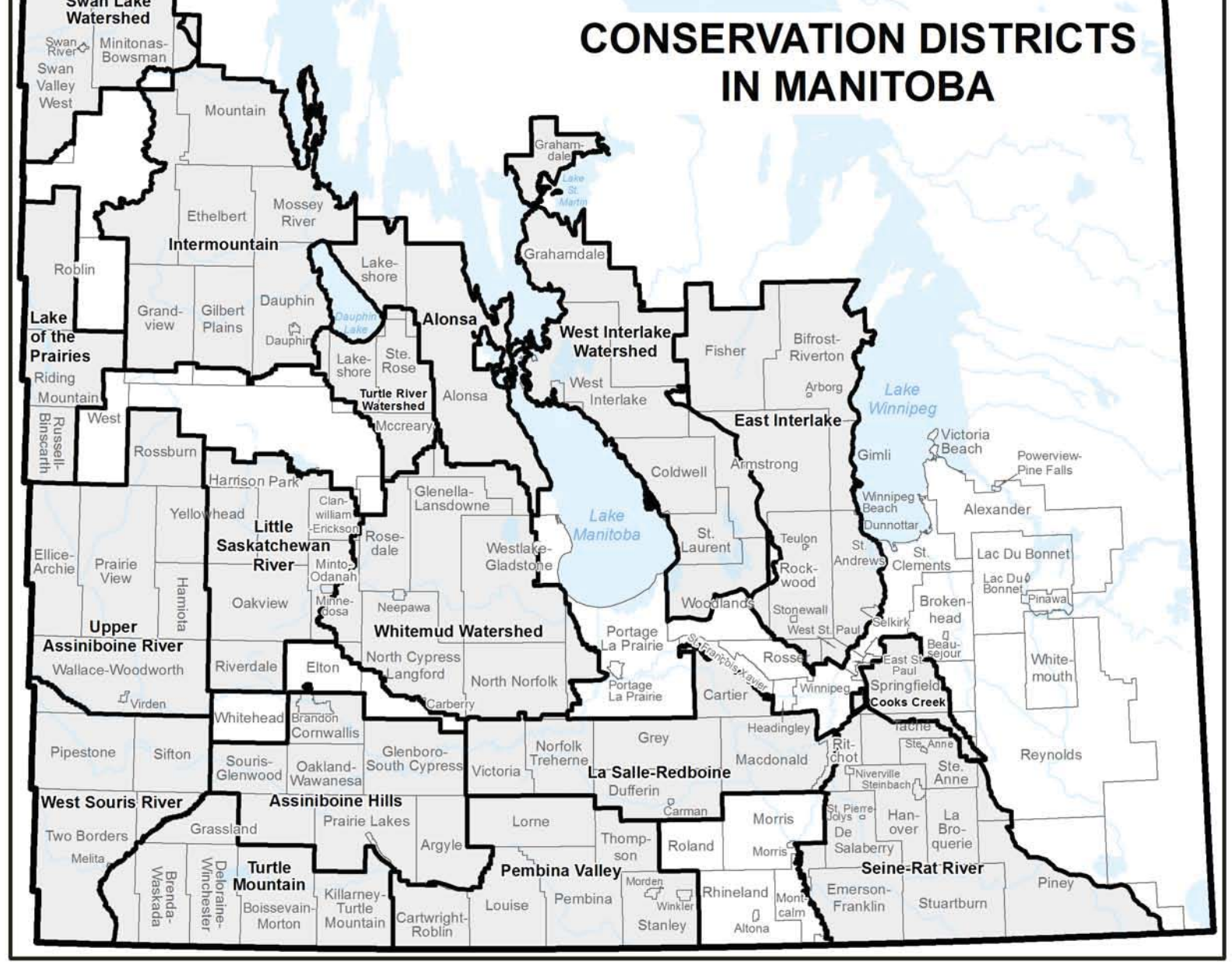
Enter this number on page 7 of Application Form.

Conversion Factor: 1 IGPM = 4.546 l/m





CONSERVATION DISTRICTS IN MANITOBA



Existing and Proposed Manure Storage Facility Dimension Table

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

CELL	Existing Manure Storage Facility Dimensions						Storage Capacity (days)
	Width	Length	Depth	Height (Above Grade)	Slope (H:L)		
					Inside	Outside	
Primary	250 ft	130 ft	10 ft	5 ft	3:1	5:1	65
Secondary	250 ft	460 ft	9 ft	5 ft	3:1	5:1	260
Tertiary	ft	ft	ft	ft			Total 325 days plus 1 ft freeboard.
Circular Tank		Diameter	Height	Depth (Above Grade)			
		ft	ft	ft			

Permit/Registration # #LM-547 _____



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

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

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



Archived: Tuesday, April 23, 2019 9:33:40 AM

From: Murray, Colin (SD)

Sent: Fri, 12 Apr 2019 15:00:05

To: 'Gary Plohman'

Subject: Data request G Plowman 20190402 SAR Platinum pork summerfield rhineland

Importance: Normal

Attachments:

Data request G Plowman 20190402 SAR Platinum pork summerfield rhineland.xlsx Data request G Plowman 20190402 SAR Platinum pork summerfield rhineland.docx

Hi Gary

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's (CDC) rare species database for your area of interest. This includes the 18 primary locations listed in the request; and within a two kilometer radius buffer from the edge of these sites.

I am attaching a Microsoft Excel spreadsheet summarizing these occurrences and also a Word formatted table. The spreadsheet includes scientific and common names, the provincial (SRank) rank for each species as well as the Manitoba Endangered Species and Ecosystem Act, and the federal Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and Species at Risk Act (SARA) designations.

Further information on this ranking system can be found on our website at: <http://www.natureserve.org/conservation-tools/conservation-status-assessment>.

These designations can be found at:

<http://web2.gov.mb.ca/laws/statutes/ccsm/e111e.php>,

<https://www.canada.ca/en/environment-climate-change/services/committee-status-endangered-wildlife.html> and

<http://www.sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1>.

Manitoba's recommended setback distances can be found at:

https://www.gov.mb.ca/sd/pubs/conservation-data-centre/mbcdc_bird_setbacks.pdf.

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

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

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

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

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

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

Colin

Reference screen clip:

Note: Entire quarter sections shown. Search was conducted within the actual boundaries shown in the map accompanying the request.

Within site on quarter section	Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC
SE-09-001-01E1							
NE-08-001-01E1							
NW-15-001-01E1 S half							
NE-16-001-01E1 E half							
NW-16-001-01E1							
NE-17-001-01E1							
SW-20-001-01E1							
SE-29-001-01E1 S half							
SE-29-001-01E1 N half							
NW-29-001-01E1							
SW-29-001-01E1							
NW-29-001-01E1							
SW-30-001-01E1 S half							
NW-19-001-01E1 E half							
NW-19-001-01E1 W half							
SW-19-001-01E1 W half							
SE-24-001-01W1							
SW-24-001-01W1							
NW-13-001-01W1 E half							

Within 2km radius of site boundary

Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC	
SE-09-001-01E1	Vertebrate Animal	Contopus virens	(Eastern Wood-pewee)	S4B	NA	Special Concern	Special Concern
NW-15-001-01E1 S half	Vertebrate Animal	Dolichonyx oryzivorus	(Bobolink)	S4B	NA	Threatened	Threatened

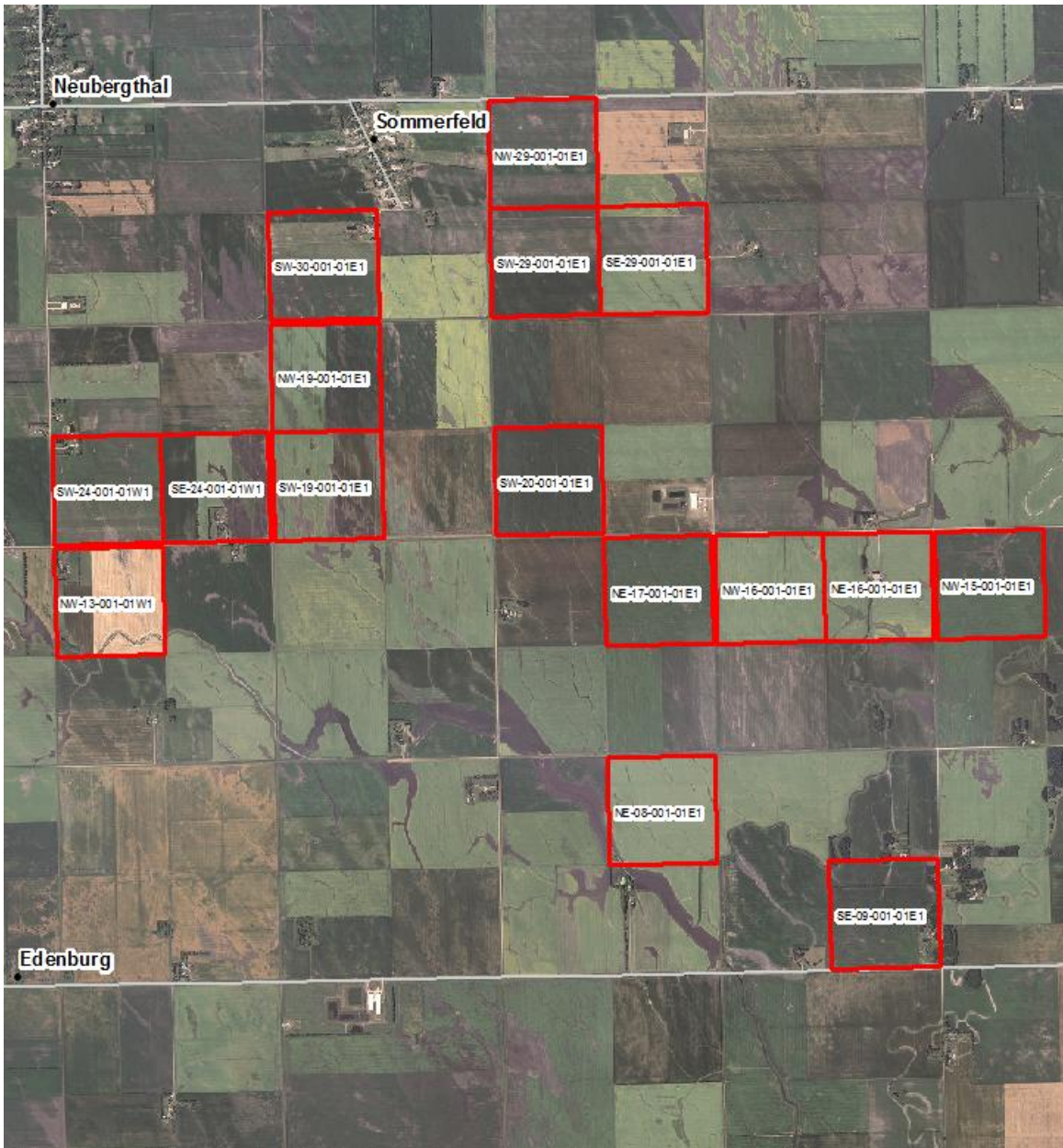
Access Roads and Road Allowances

No search conducted

General Area Records Low Locational Accuracy

Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC

Notes: None.



Colin Murray
Information Manager
Manitoba Conservation Data Centre
Wildlife and Fisheries Branch
Department of Sustainable Development

200 Saulteaux Crescent
Winnipeg, Manitoba, R3J3W3
204-945-7760
colin.Murray@gov.mb.ca
<http://www.gov.mb.ca/sd/cdc/index.html>



From: Gary Plohman <srossing@mymts.net>
Sent: April-02-19 6:35 PM
To: Murray, Colin (SD) <Colin.Murray@gov.mb.ca>
Subject: re: endangered species

Hi Colin

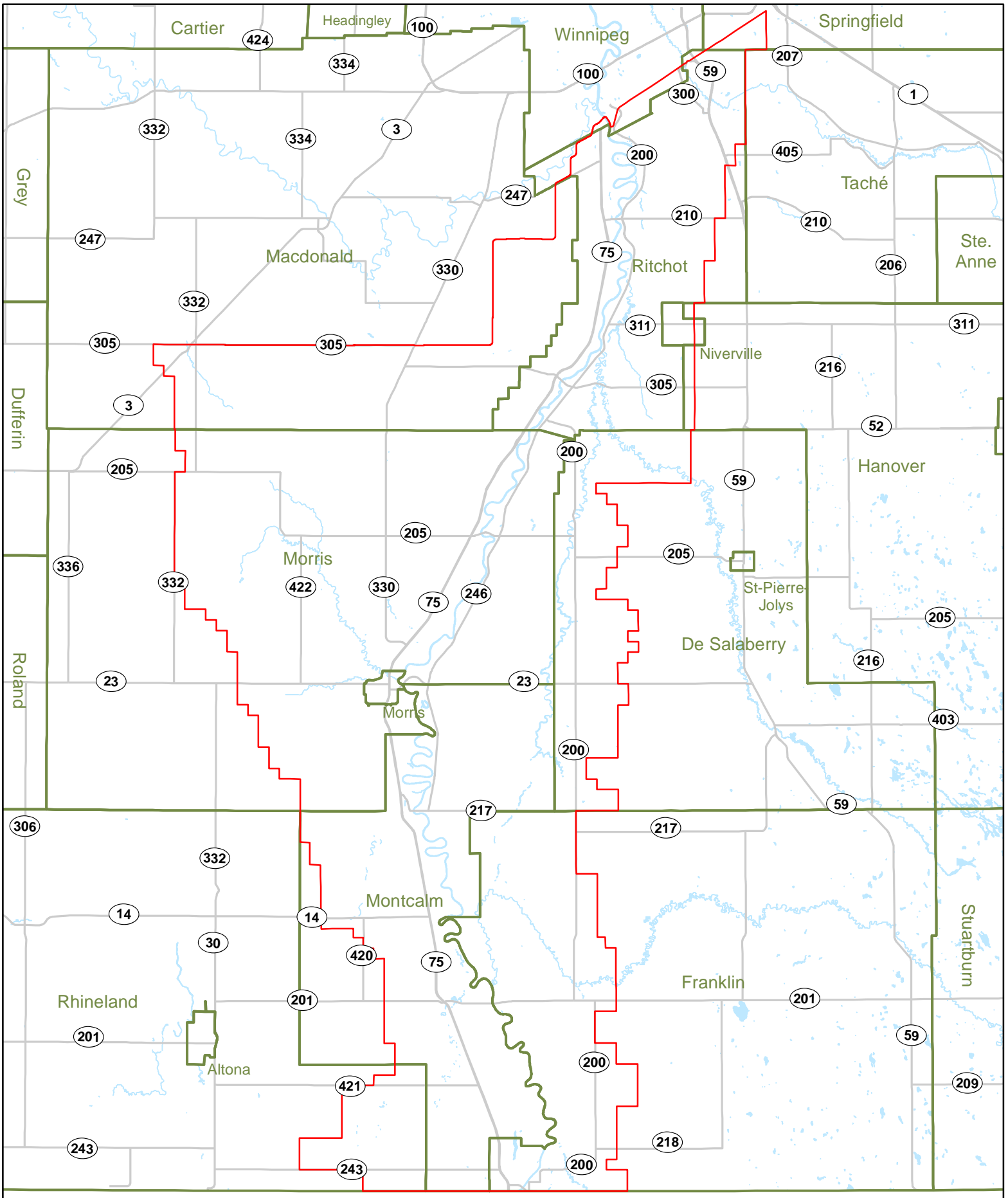
I am working with Platinum Pork Inc. located near Gretna, Mb on a technical review application for a swine farm expansion and am required to determine whether any endangered species are present at the building site or manure spread acres. I am hoping that you can provide the necessary information in word or pdf format so that it can be attached to the technical review application.

A list of manure spread fields involved with this proposed site is attached.

I trust this is the information you need.

Thank you.

Gary Plohman
Ph (home) 204 268-3218
Ph (cell) 204 266-1689



Upper Red River Designated Flood Area

-  Municipal Boundaries
-  Provincial Roadways
-  Designated Flood Area



1a - Pigs

Operation Name:

Operation Type	Storage Type	Volatilization	Animal Numbers (Places)	Average Animal Wt (lb)	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted Per Herd Per Year (lb/yr/herd)
Boars (Purchased)	Liquid Uncovered Earthen	30%		465	0	0
Weanlings	Liquid Uncovered Earthen	30%		38	0	0
Growers/Finishers	Liquid Uncovered Earthen	30%		171	0	0
Sows, farrow to 6.2 kg	Liquid Covered	10%	3600	n/a	173278	96755
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%		n/a	0	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%		n/a	0	0

Last Revised April 26, 2018

2 - Crop Rotation

Operation Name:

Enter the operation name on the livestock tab(s)

Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake
	P2O5	N	N	Units				P2O5 (lb)	N (lb)	
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	42.8	bu/ac	400	17805	33042	54613
Corn Grain	0.44	0.97	1.53	lb/bu	130.3	bu/ac	610	34973	77099	121609
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac		-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac		-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac		-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac		-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac		-	-	-
Oats	0.26	0.62	1.07	lb/bu		bu/ac		-	-	-
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac		-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac		-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac		-	-	-
Rye	0.45	1.06	1.67	lb/bu		bu/ac		-	-	-
Soybeans	0.84	3.87	5.2	lb/bu	39.5	bu/ac	610	20240	93248	125294
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	60.6	bu/ac	400	14302	36360	51146
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
Total Acres							2020	87319	239748	352662
Estimated Average Removal/Uptake (lb/ac)								43.2	118.7	174.6
Acres in Hanover and La Broquerie										
Proportion in Hanover or La Broquerie								0%		
Additional Acres										
Crop Planned on Additional Acres										
Total Acreage							2020			

***Notes:**

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

3 - Farm Excretion

Operation Name: Enter the operation name on the livestock tab(s)

Species	Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
Pigs	Boars	0	0
	Weanlings	0	0
	Growers/finishers	0	0
	Sows, farrow to 5 kg	173278	96755
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
Beef	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Mature Cows, plus assoc livestock	0	0
Sheep	Ewes	0	0
	Replacement Ewes	0	0
	Rams	0	0
	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
Chickens	Broilers	0	0
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	Layer Pullets	0	0
	Layer Hens	0	0
	Breeder Pullets	0	0
	Breeder Hens	0	0
Turkeys	Broiler Hens (0-9 wks)	0	0
	Hens (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Light Toms (0-12 wks)	0	0
	Toms (0-13 wks)	0	0
	Heavy Toms (0-15 wks)	0	0
	Breeding Hen Growers (0-30 wks)	0	0
	Breeding Hens (30-60 wks)	0	0
	Breeding Tom Grower (0-18 wks)	0	0
	Breeding Tom Grower (0-30 wks)	0	0
	Breeding Tom (30-60 wks)	0	0
Total		173278	96755

Note:

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

4 - Land Base Summary**Operation Name:** Enter the operation name on the livestock tab(s)

Nutrients Excreted	lbs
Nitrogen	173278
Phosphorus (P2O5)	96755
Crop Nutrient Use	
	lb/ac
Crop N Uptake	174.6
Crop Phosphorus (P2O5) Removal	43.2
Operation-specific Phosphorus (P2O5) Credit	86.5
Land Available	2020
Land Base Required	
	acres
Acres for Nitrogen	993
Acres for Phosphorus (P2O5)	1119
Phosphorus Balance	
	acres
Acres for Phosphorus Balance (1X)	2238

Last revised October 16, 2018

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Grain Corn	610	130.3	Bu./Acre	MASC (Risk areas and soil types)
Red Spring Wheat	400	60.6	Bu./Acre	MASC (Risk areas and soil types)
Soybeans	610	39.5	Bu./Acre	MASC (Risk areas and soil types)
Canola	400	42.8	Bu./Acre	MASC (Risk areas and soil types)
Total Net Acreage for Manure Application	2020			

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



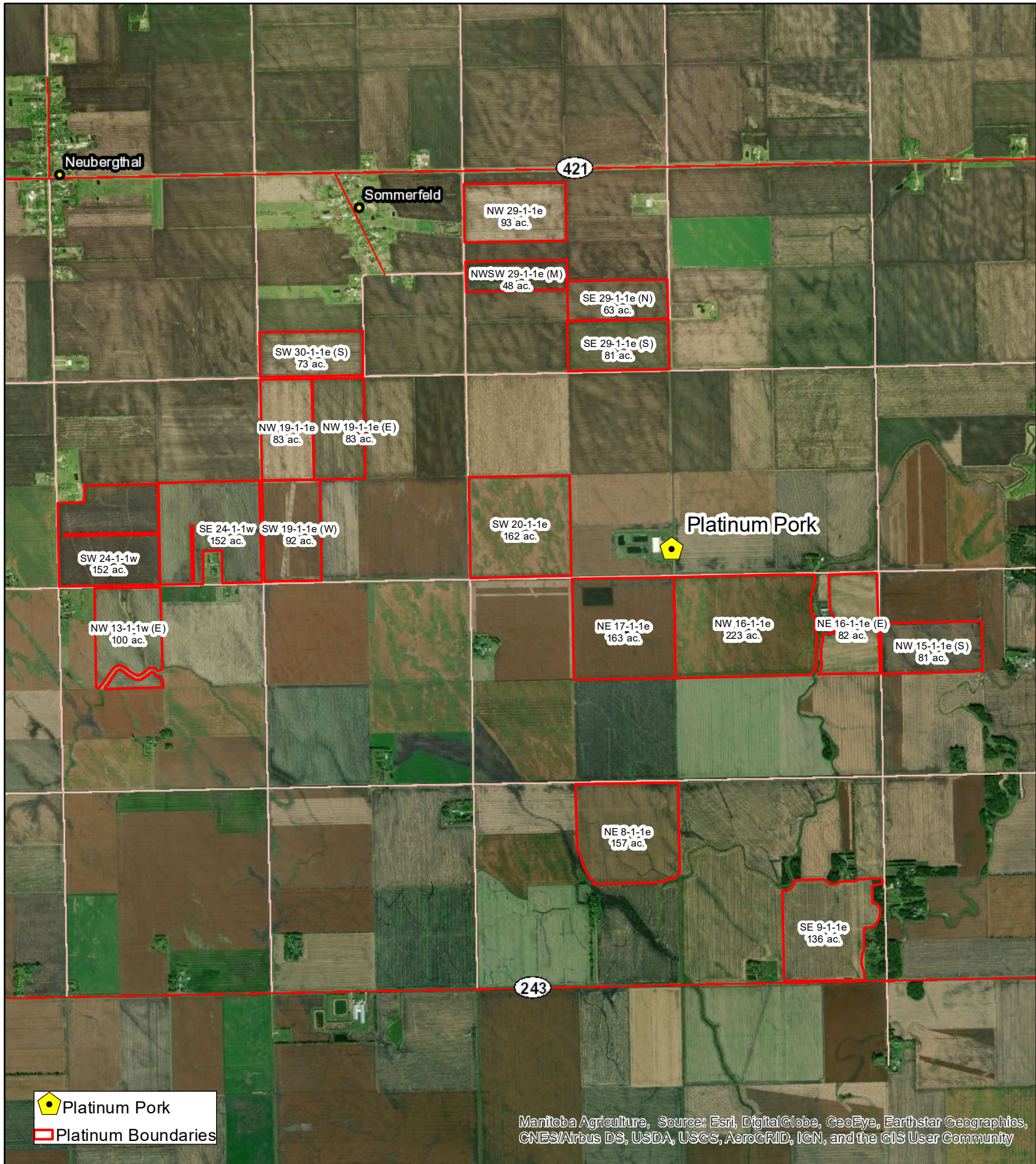
MANURE APPLICATION FIELD CHARACTERISTICS TABLE

Field	A Legal Description	B Rural Municipality	C O/C/L/A	D Total Acreage	E Setbacks, including features	F Net Acreage for Manure Application	G Agriculture Capability Class and Subclass	H Soil Phosphorus (ppm Olsen P) 0-6 inches	I Development Plan Designation	J Zoning
1	SE 9-1-1e	Rhineland	A	136	Drain - Accounted For	136	2w 2w, 2w	Zones, 8-19	3-2011, General Agricultural	2013-9, Agricultural Zone
2	NE 8-1-1e	Rhineland	A	157	Drain - Accounted For	157	2w, 3w, 3n	6	3-2011, General Agricultural	2013-9, Agricultural Zone
3	NW 15-1-1e (S)	Rhineland	A	81		81	2w, 2w 3w, 3l	Zones, 9-24	3-2011, Restricted Agricultural	2013-9, Restricted Agricultural Zone
4	NE 16-1-1e (E)	Rhineland	A	82	Drain - Accounted For	82	2w	Zones, 19-22	3-2011, General Agricultural	2013-9, Agricultural Zone
5	NW 16-1-1e	Rhineland	A	223	Drain - Accounted For	223	2w, 3w	Zones, 26-39	3-2011, General Agricultural	2013-9, Agricultural Zone
6	NE 17-1-1e	Rhineland	A	163		163	2w	Zones, 35-48	3-2011, General Agricultural	2013-9, Agricultural Zone
7	SW 20-1-1e	Rhineland	A	162		162	2w, 2w 2w, 3w	34	3-2011, General Agricultural	2013-9, Agricultural Zone
8	SE 29-1-1e (S)	Rhineland	A	81		81	2w, 1, 2w 1	17	3-2011, General Agricultural	2013-9, Agricultural Zone
9	SE 29-1-1e (N)	Rhineland	A	63		63	2w, 1	30	3-2011, General Agricultural	2013-9, Agricultural Zone
10	NWSW 29-1-1e (M)	Rhineland	A	48		48	1, 2w 1	21	3-2011, General Agricultural	2013-9, Agricultural Zone
11	NW 29-1-1e	Rhineland	A	93		93	2w, 1, 2w 3n	24	3-2011, General Agricultural	2013-9, Agricultural Zone
12	SW 30-1-1e (S)	Rhineland	A	73		73	2w 2w, 2w	18	3-2011, Restricted Agricultural	2013-9, Restricted Agricultural Zone
13	NW 19-1-1e (E)	Rhineland	A	83		83	2w 2w, 1	25	3-2011, General Agricultural	2013-9, Agricultural Zone
14	NW 19-1-1e (W)	Rhineland	A	83		83	2w, 2w 2w	16	3-2011, General Agricultural	2013-9, Agricultural Zone
15	SW 19-1-1e (W)	Rhineland	A	92		92	2w, 2w 3d	26	3-2011, General Agricultural	2013-9, Agricultural Zone
16	SE 24-1-1w	Rhineland	A	152		152	2w, 2w 3d, 3w, 1 2w, 1	30	3-2011, General Agricultural	2013-9, Agricultural Zone
17	SW 24-1-1w	Rhineland	A	152		152	1 2w, 2w	15	3-2011, General Agricultural	2013-9, Agricultural Zone
18	NW 13-1-1w (E)	Rhineland	A	100	Slough - 4 acres	96	2w, 1, 3w,	25	3-2011, General Agricultural	2013-9, Agricultural Zone
19										
20										

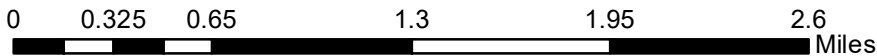
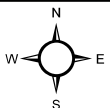
Total Net Acreage for Manure Application: 2020

- A. Enter the legal description for each parcel of land that will receive manure: Sec, Twp, Rge or River Lot (including parish).
- B. Identify the Rural Municipality in which the parcel is located.
- C. Indicate how the land has been secured for manure application: O – Own / C-Crown / L – Lease / A – Agreement. Multiple designations may be used as appropriate (ex. C/A for Crown lands that are under a spread agreement with the producer that holds the agricultural Crown land lease).
- D. Enter the total acreage for the parcel.
- E. Enter setbacks from surface water or groundwater features that reduce the land available for manure application; include identification of type of feature (ex. 8m, Order 3 drain).
- F. Enter the net acreage available for manure application for the parcel after taking into account setbacks and excluding Class 6, 7 and unimproved organic soils.
- G. Enter the agriculture capability class and subclass ratings for the acreage available for manure application.
- H. Provide soil test results for phosphorus in ppm Olsen P for soil samples taken at the 0-6 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-testing laboratory.
- I. Indicate the Development Plan and its by-law number in addition to the map designation for each field (ex. By-law #1/2008: AG).
- J. Indicate the Zoning By-law and its by-law number in addition to the zoning for each field (ex. By-law 12/2009: AG 80).

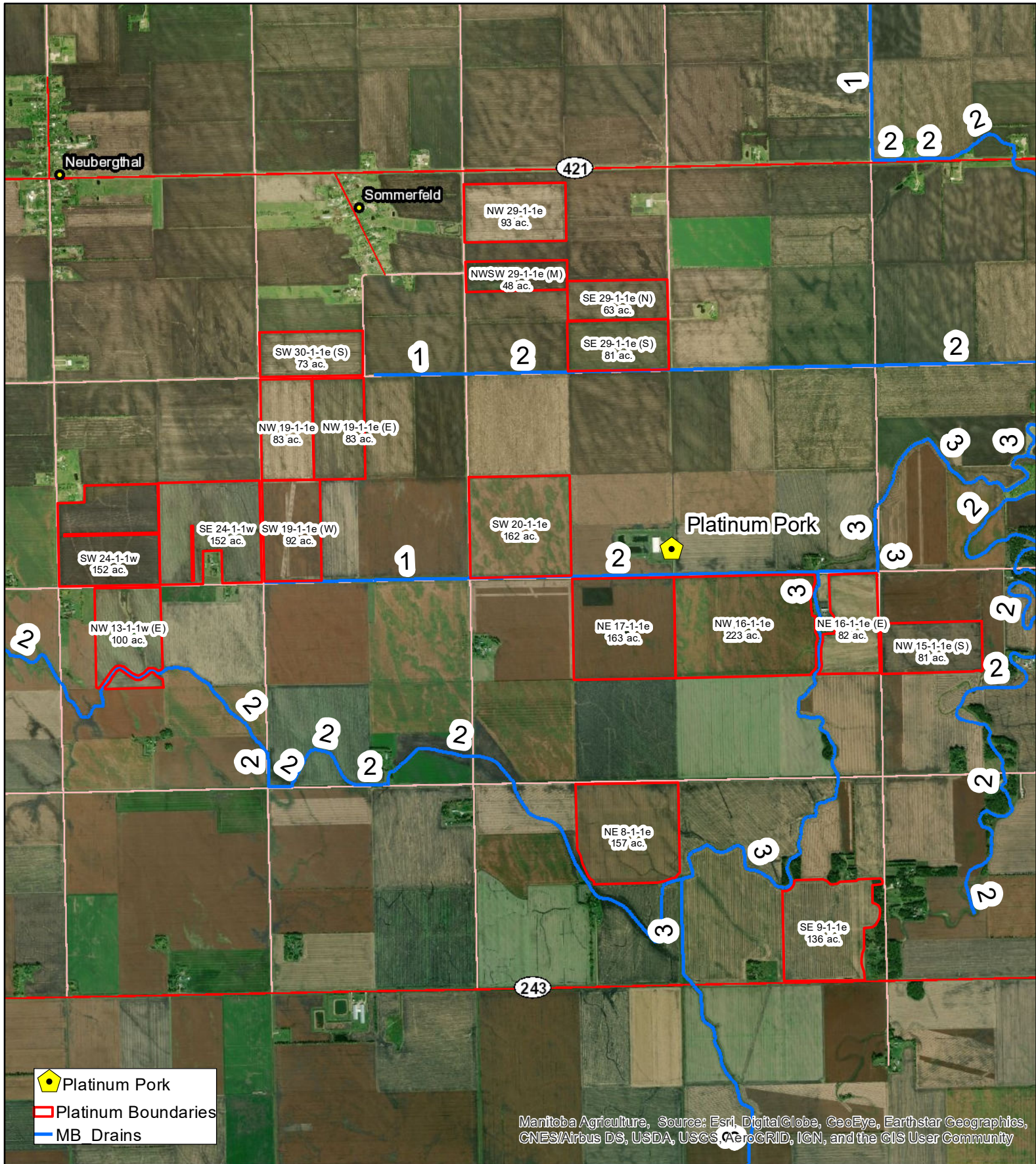
Platinum Pork - Spread Fields



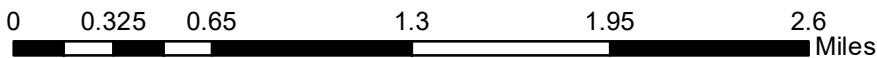
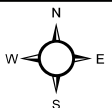
Manitoba Agriculture, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



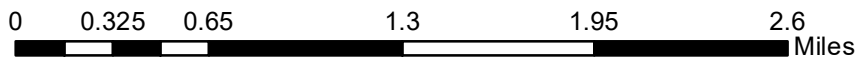
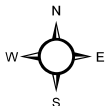
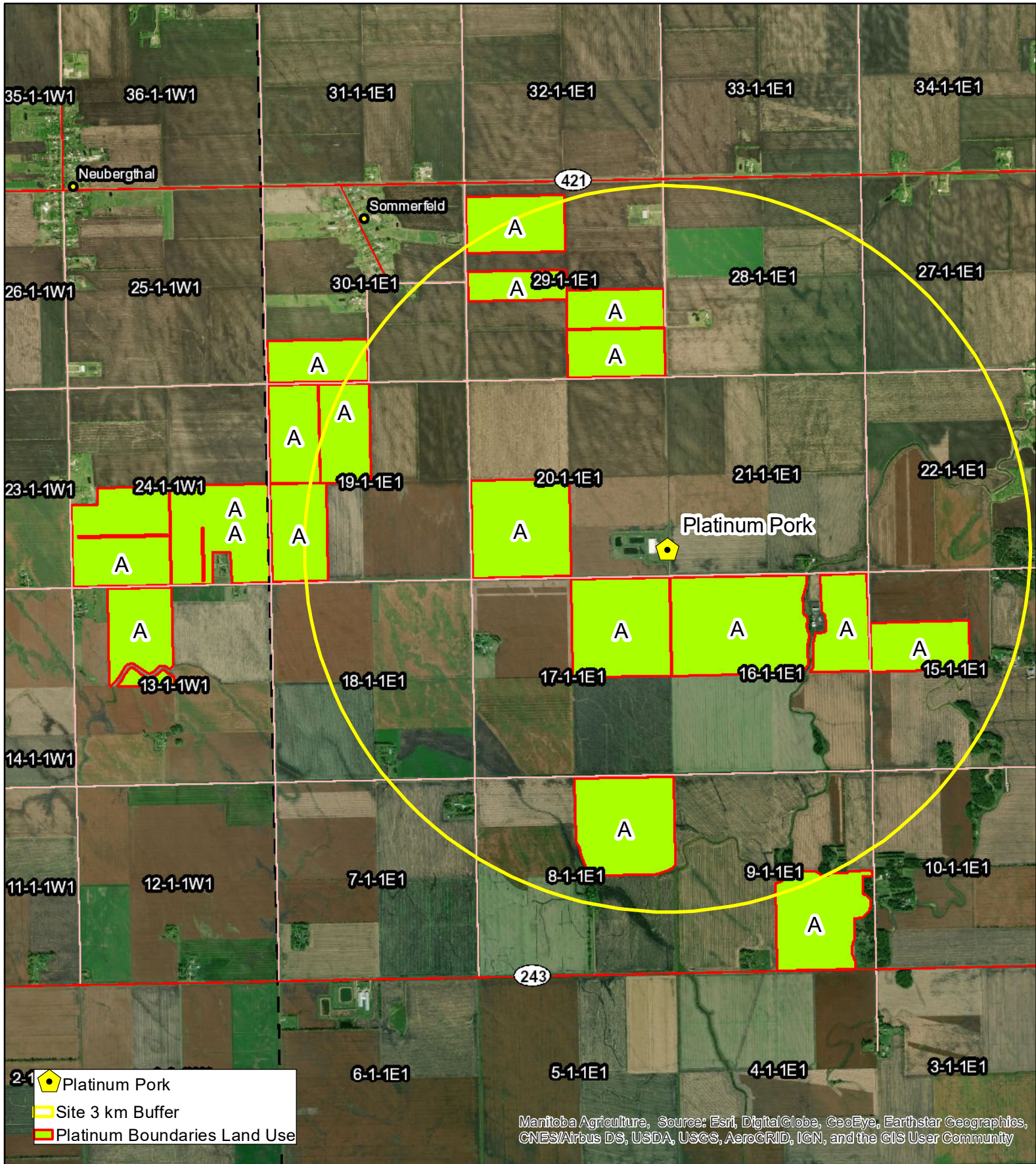
Platinum Pork - Drains



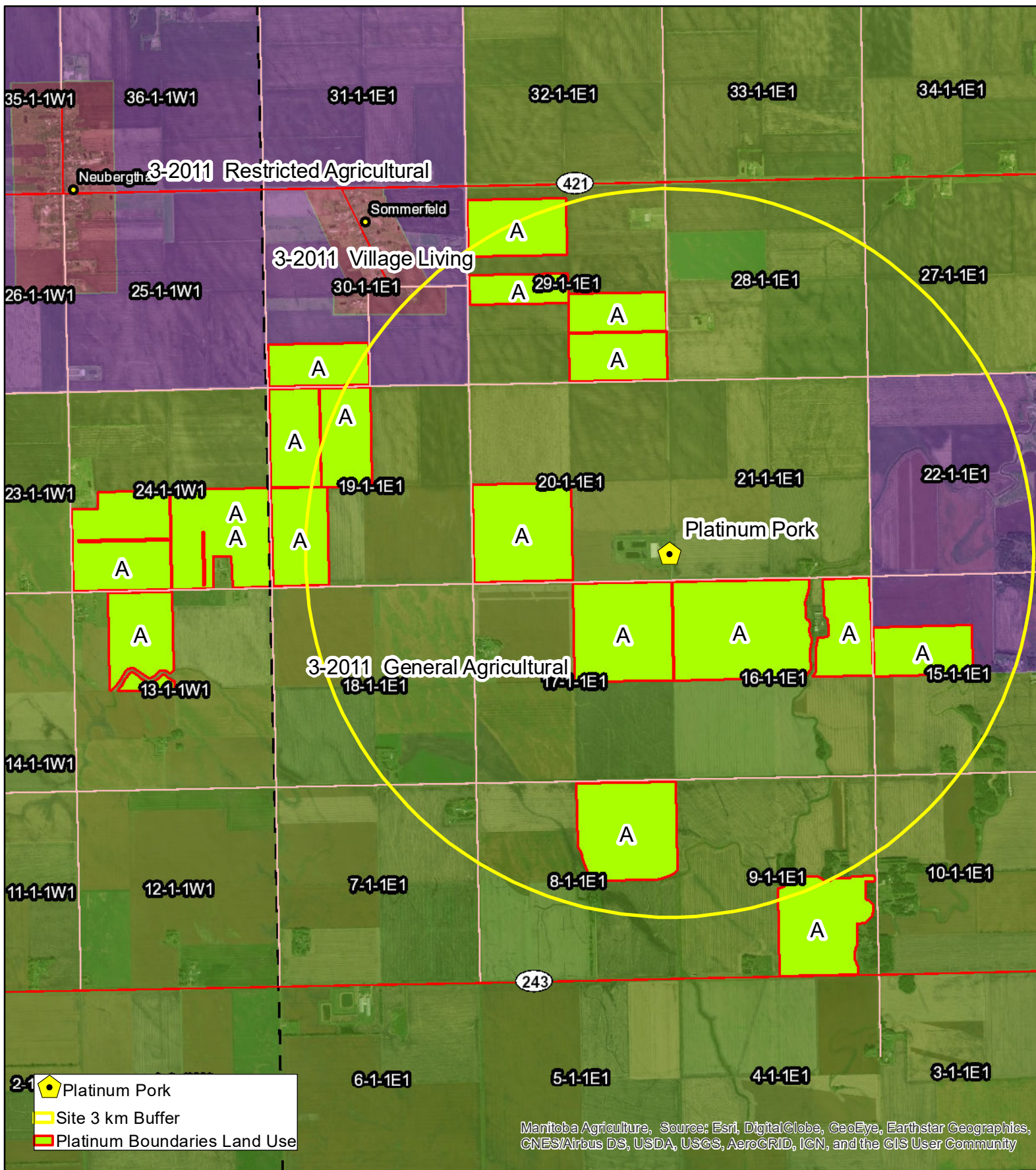
Manitoba Agriculture, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



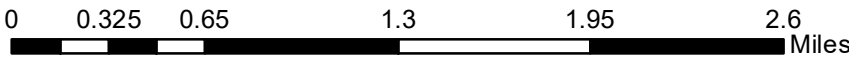
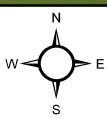
Platinum Pork - Land Use



Platinum Pork - Land Use - Development Plan



Manitoba Agriculture, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



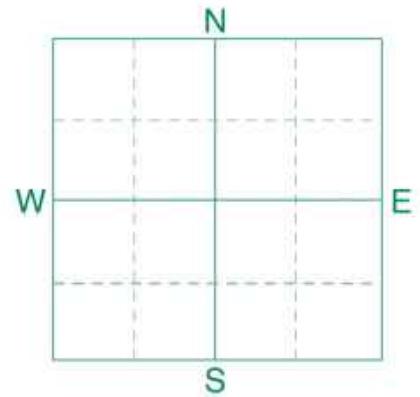


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Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **254** Field #1.
 SAMPLE ID **ZONE 5**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **9** QTR **SE** ACRES **145**
 PREV. CROP **Grass/Pasture**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12597613** BOX # **5465**
 LAB # **NW183567**

Date Sampled **11/07/2018**

Date Received **11/08/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High								
Nitrate	0-6" 6-24"	28 lb/ac 33 lb/ac	*****	*****	*****	*****	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	0-24"	61 lb/ac	*****	*****	*****	*****	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
							LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen Phosphorus	10 ppm	*****	*****	*****	*****	N		N		N			
Potassium	386 ppm	*****	*****	*****	*****	P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur	0-6" 6-24"	76 lb/ac 360 +lb/ac	*****	*****	*****	*****	Cl		Cl		Cl		
Boron						S		S		S			
Zinc	1.62 ppm	*****	*****	*****	*****	B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	6.0 %	*****	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)	0.3 %	**				Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	0.91 mmho/cm 2.63 mmho/cm	*****	*****	*****	0-6" 7.4							
			*****	*****	*****	6-24" 7.6							

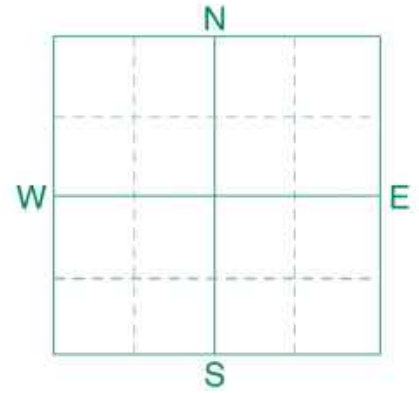


GJ Chemical Co._{INC.}

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

SOIL TEST REPORT

FIELD ID **13** Field # 2.
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **ne 8-1-1 e** RANGE
 SECTION QTR ACRES **160**
 PREV. CROP **Sunflower**



SUBMITTED FOR:
Rose Field Farms

Rosenfeld,

SUBMITTED BY: GJ4376
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2496832** BOX # **3024**
 LAB # **NW157341**

Date Sampled

Date Received **10/26/2018**

Date Reported **10/30/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Wheat-Spring		Barley		Wheat-Spring		
Nitrate	0-6" 6-24"	***				YIELD GOAL		YIELD GOAL		YIELD GOAL		
			9 lb/ac 6 lb/ac	60 BU		90 BU		70 BU				
	0-24"		15 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
				Band/Maint.		Band/Maint.		Band/Maint.				
				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Olsen Phosphorus	6 ppm	*****			N	147	N	125	N	174		
Potassium	382 ppm	*****			P ₂ O ₅	39 Band *	P ₂ O ₅	42 Band *	P ₂ O ₅	46 Band *		
Chloride					K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (Starter)*		
Sulfur	0-6" 6-24"	48 lb/ac 360 +lb/ac	*****		Cl		Cl		Cl			
Boron					S	0	S	0	S	0		
Zinc	0.76 ppm	*****			B		B		B			
Iron					Zn	3 Band (Trial)	Zn	3 Band (Trial)	Zn	3 Band (Trial)		
Manganese					Fe		Fe		Fe			
Copper					Mn		Mn		Mn			
Magnesium					Cu		Cu		Cu			
Calcium					Mg		Mg		Mg			
Sodium					Lime		Lime		Lime			
Org.Matter	5.8 %	*****			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)					Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6"	0.57 mmho/cm	*****		0-6"	8.1						
	6-24"	2.02 mmho/cm	*****		6-24"	8.2						

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

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 = 42 K2O = 45 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 26 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

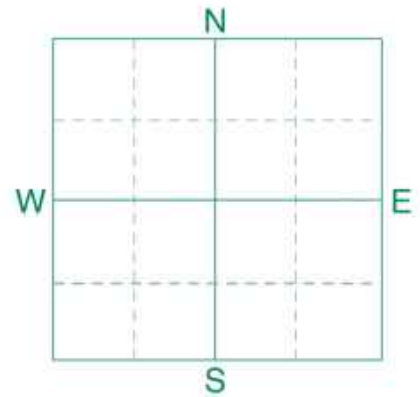


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 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **256** Field # 3.
 SAMPLE ID **ZONE 5**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **15** QTR **NW** ACRES **80**
 PREV. CROP **Oats**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162783** BOX # **5989**
 LAB # **NW187354**

Date Sampled **11/09/2018**

Date Received **11/10/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL	
Nitrate	0-6" 6-24"	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
	0-24"					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
	18 lb/ac 33 lb/ac					N		N		N	
	51 lb/ac					P ₂ O ₅		P ₂ O ₅		P ₂ O ₅	
Olsen Phosphorus	10 ppm					K ₂ O		K ₂ O		K ₂ O	
Potassium	449 ppm					Cl		Cl		Cl	
Chloride						S		S		S	
Sulfur	0-6" 6-24"	*****				B		B		B	
Boron	120 +lb/ac 360 +lb/ac					Zn		Zn		Zn	
Zinc	1.08 ppm					Fe		Fe		Fe	
Iron						Mn		Mn		Mn	
Manganese						Cu		Cu		Cu	
Copper						Mg		Mg		Mg	
Magnesium						Lime		Lime		Lime	
Calcium						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)	
Sodium						Buffer pH			% Ca	% Mg	% K
Org.Matter	6.8 %								% Na	% H	
Carbonate(CCE)	2.0 %					0-6" 7.5					
Sol. Salts	0-6" 6-24"	*****				6-24" 7.6					

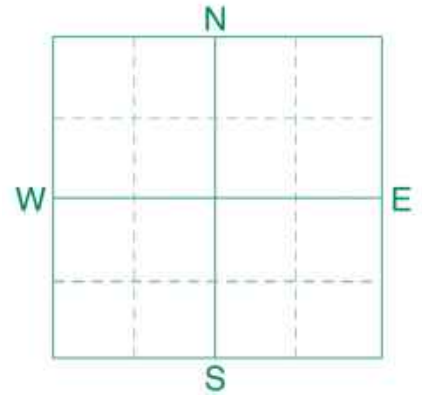


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SOIL TEST REPORT

FIELD ID **50** Field # 4.
 SAMPLE ID **ZONE 3**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **16** QTR **NE** ACRES **87**
 PREV. CROP **Canola-bu**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162766** BOX # **5752**
 LAB # **NW185743**

Date Sampled **11/08/2018**

Date Received **11/09/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
Nitrate	0-6" 6-24"	12 lb/ac 12 lb/ac	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
	0-24"	24 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen Phosphorus	22 ppm	*****				N		N		N			
Potassium	462 ppm	*****				P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****				Cl		Cl		Cl		
Boron							S		S		S		
Zinc	1.20 ppm	*****				B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	5.6 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)	2.8 %	*****				Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	1.62 mmho/cm 3.24 mmho/cm	*****				0-6" 7.9						
							6-24" 8.3						

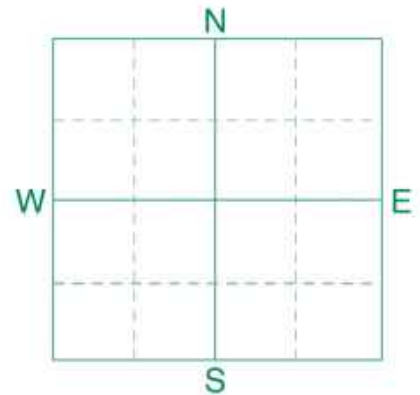


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Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **50** Field # **4**.
 SAMPLE ID **ZONE 4**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **16** QTR **NE** ACRES **87**
 PREV. CROP **Canola-bu**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162767** BOX # **5752**
 LAB # **NW185745**

Date Sampled **11/08/2018**

Date Received **11/09/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
		*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION		LB/ACRE		APPLICATION	
Nitrate	0-6" 11 lb/ac 6-24" 15 lb/ac 0-24" 26 lb/ac					N		N		N			
Phosphorus	Olsen 20 ppm	*****	*****	*****	*****	P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Potassium	520 ppm	*****	*****	*****	*****	K ₂ O		K ₂ O		K ₂ O			
Chloride						Cl		Cl		Cl			
Sulfur	0-6" 106 lb/ac 6-24" 360 +lb/ac	*****	*****	*****	*****	S		S		S			
Boron						B		B		B			
Zinc	1.93 ppm	*****	*****	*****	*****	Zn		Zn		Zn			
Iron						Fe		Fe		Fe			
Manganese						Mn		Mn		Mn			
Copper						Cu		Cu		Cu			
Magnesium						Mg		Mg		Mg			
Calcium						Lime		Lime		Lime			
Sodium													
Org.Matter	6.0 %	*****	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)	1.8 %	*****	*****	*****	*****	Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.8 mmho/cm 6-24" 1.65 mmho/cm	*****	*****	*****	*****	0-6" 7.8							
						6-24" 8.0							

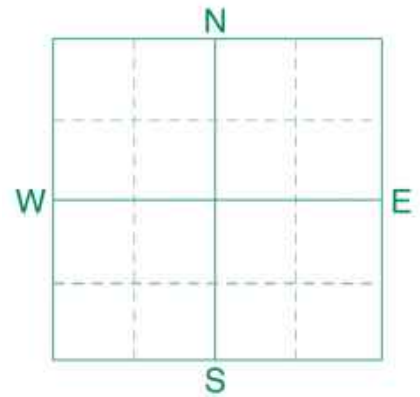


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 (http://www.agvise.com)
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **50** Field # **4.**
 SAMPLE ID **ZONE 5**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **16** QTR **NE** ACRES **87**
 PREV. CROP **Canola-bu**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162768** BOX # **5752**
 LAB # **NW185746**

Date Sampled **11/08/2018**

Date Received **11/09/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL	
Nitrate	0-6" 6-24"	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
	0-24"					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
	12 lb/ac 30 lb/ac					N		N		N	
Olsen Phosphorus	19 ppm	*****				P ₂ O ₅		P ₂ O ₅		P ₂ O ₅	
Potassium	500 ppm	*****				K ₂ O		K ₂ O		K ₂ O	
Chloride						Cl		Cl		Cl	
Sulfur	0-6" 6-24"	*****				S		S		S	
	112 lb/ac 360 +lb/ac					B		B		B	
Boron						Zn		Zn		Zn	
Zinc	1.70 ppm	*****				Fe		Fe		Fe	
Iron						Mn		Mn		Mn	
Manganese						Cu		Cu		Cu	
Copper						Mg		Mg		Mg	
Magnesium						Lime		Lime		Lime	
Calcium						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)	
Sodium						Buffer pH			% Ca	% Mg	% K
Org.Matter	6.1 %	*****									
Carbonate(CCE)	0.9 %	*****									
Sol. Salts	0-6" 6-24"	*****				0-6" 7.8					
	0.83 mmho/cm 2.22 mmho/cm					6-24" 8.1					

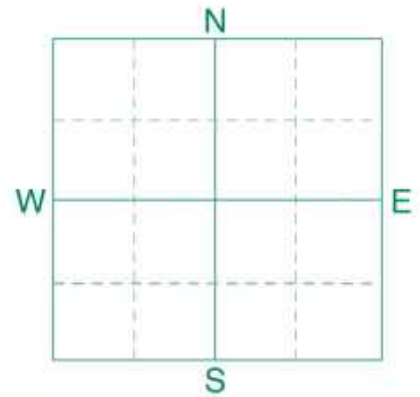


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 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **40** Field # 5.
 SAMPLE ID **ZONE 4**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **16** QTR **NW** ACRES **223**
 PREV. CROP **Beans-Edible**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162787** BOX # **5831**
 LAB # **NW187363**

Date Sampled **11/09/2018**

Date Received **11/10/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL					
Nitrate	0-6" 6-24"	35 lb/ac				*****		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
	0-24"					*****		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION				
						N		N		N					
Phosphorus	Olsen	35 ppm				*****		P ₂ O ₅		P ₂ O ₅					
Potassium		494 ppm				*****		K ₂ O		K ₂ O					
Chloride						*****		Cl		Cl					
Sulfur	0-6" 6-24"	58 lb/ac 360 +lb/ac				*****		S		S					
						*****		B		B					
Boron						*****		Zn		Zn					
Zinc		3.23 ppm				*****		Fe		Fe					
Iron						*****		Mn		Mn					
Manganese						*****		Cu		Cu					
Copper						*****		Mg		Mg					
Magnesium						*****		Lime		Lime					
Calcium						*****		Soil pH		% Base Saturation (Typical Range)					
Sodium						*****		Buffer pH	Cation Exchange Capacity		% Ca	% Mg	% K	% Na	% H
Org.Matter		6.6 %				*****									
Carbonate(CCE)		0.6 %				****									
Sol. Salts	0-6" 6-24"	0.66 mmho/cm 3.34 mmho/cm				*****		0-6" 7.7							
						*****		6-24" 8.1							

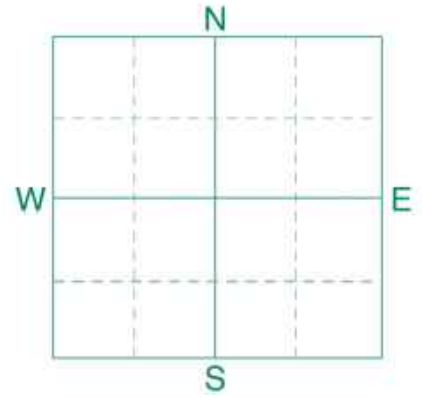


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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **40** Field # 5.
 SAMPLE ID **ZONE 5**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **16** QTR **NW** ACRES **223**
 PREV. CROP **Beans-Edible**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162788** BOX # **5872**
 LAB # **NW187364**

Date Sampled **11/09/2018**

Date Received **11/10/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
Nitrate	0-6" 6-24"	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	0-24"	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	33 ppm	*****				N		N		N			
Potassium	631 ppm	*****				P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur	0-6" 6-24"	*****				Cl		Cl		Cl			
Boron						S		S		S			
Zinc	2.80 ppm	*****				B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	6.7 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)	1.3 %	*****				Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	*****				0-6" 7.7							
						6-24" 8.1							

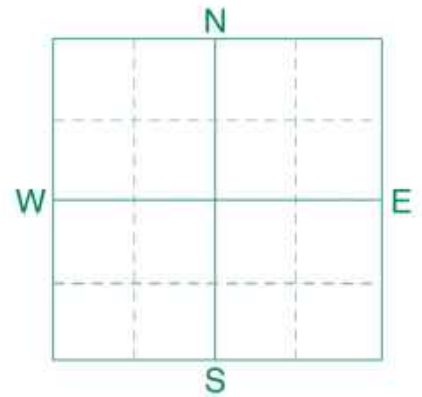


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SOIL TEST REPORT

FIELD ID **30** Field # **6.**
 SAMPLE ID **ZONE 2&3**
 FIELD NAME
 COUNTY **1E**
 TWP **1** RANGE
 SECTION **17** QTR **NE** ACRES **160**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
B & S FARMS

SUBMITTED BY: **SA6009**
ANTARA RESEARCH%BRUNEL S.
44 VALCOURT BAY
BOX 321
ST JEAN, MB **ROG 2B0**

REF # **12162761** BOX # **5752**
 LAB # **NW185749**

Date Sampled **11/08/2018**

Date Received **11/09/2018**

Date Reported **2/22/2019**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL					
Nitrate	0-6" 6-24"	75 lb/ac				*****		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
	0-24"					*****		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION				
						N		N		N					
Phosphorus	Olsen	38 ppm				*****		P ₂ O ₅		P ₂ O ₅					
Potassium		627 ppm				*****		K ₂ O		K ₂ O					
Chloride						*****		Cl		Cl					
Sulfur	0-6" 6-24"	70 lb/ac 360 +lb/ac				*****		S		S					
						*****		B		B					
Boron						*****		Zn		Zn					
Zinc		3.21 ppm				*****		Fe		Fe					
Iron						*****		Mn		Mn					
Manganese						*****		Cu		Cu					
Copper						*****		Mg		Mg					
Magnesium						*****		Lime		Lime					
Calcium						*****		Soil pH		% Base Saturation (Typical Range)					
Sodium						*****		Buffer pH	Cation Exchange Capacity		% Ca	% Mg	% K	% Na	% H
Org.Matter		5.7 %				*****									
Carbonate(CCE)		1.0 %				*****									
Sol. Salts	0-6"	1.0 mmho/cm				*****		0-6" 7.8							
	6-24"	1.46 mmho/cm				*****		6-24" 7.9							

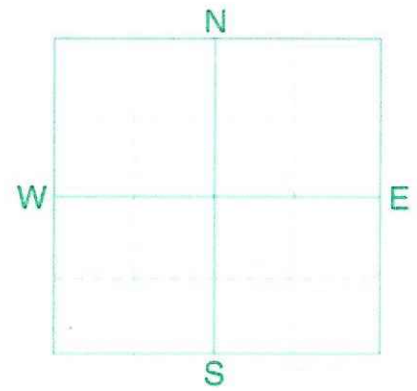


GJ Chemical Co.

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SOIL TEST REPORT

FIELD ID **12** Field # 7.
 SAMPLE ID **12**
 FIELD NAME
 COUNTY
 TWP **sw 20-1-1** RANGE
 e l
 SECTION QTR ACRES **160**
 PREV. CROP **Canola-bu**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2346428** BOX # **1786**
 LAB # **NW53518**

Date Sampled **08/30/2018** Date Received **09/01/2018** Date Reported **9/5/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	Wheat-Spring		Corn-Grain		Canola-bu		
Nitrate	0-6" 34 lb/ac	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL		
	6-24" 21 lb/ac					70 BU		150 BU		50 BU		
Phosphorus	0-24" 55 lb/ac	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
	Olsen 34 ppm					Band/Maint.		Band/Maint.		Band/Maint.		
Potassium	572 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
						N 134		N 125		N 120		
Chloride	0-6" 120 +lb/ac	*****				P ₂ O ₅ 44	Band *	P ₂ O ₅ 60	Band *	P ₂ O ₅ 45	Band *	
						6-24" 360 +lb/ac	K ₂ O 10	Band (Starter)*	K ₂ O 10	Band (2x2) *	K ₂ O 0	
Sulfur						Cl		Cl		Cl		
Boron						S 0		S 0		S 10	Band	
Zinc	3.07 ppm	*****				B		B		B		
Iron						Zn 0		Zn 0		Zn 0		
Manganese						Fe		Fe		Fe		
Copper						Mn		Mn		Mn		
Magnesium						Cu		Cu		Cu		
Calcium						Mg		Mg		Mg		
Sodium						Lime		Lime		Lime		
Org. Matter	6.1 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)		
Carbonate(CCE)						Buffer pH		% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 1.15 mmho/cm	*****				0-6" 7.5						
	6-24" 2.11 mmho/cm					6-24" 8.1						

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 26 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
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 = 60 K2O = 41 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 5 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

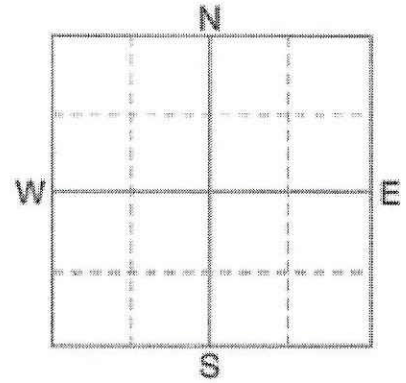


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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **11** Field # 8.
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **se 29-1-1 e** RANGE
 SECTION QTR ACRES **80**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**

GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB

ROG OBO

REF # **2431409** BOX # **876**
 LAB # **NW109087**

Date Sampled

Date Received **10/03/2018**

Date Reported **10/5/2018**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		Low Med High	Wheat-Spring		Corn-Grain		Canola-bu			
			YIELD GOAL		YIELD GOAL		YIELD GOAL			
			60 BU		160 BU		50 BU			
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
			Band/Maint.		Band/Maint.		Band/Maint.			
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
			N 115		N 130		N 128			
			P ₂ O ₅ 38	Band *	P ₂ O ₅ 64	Band *	P ₂ O ₅ 45	Band *		
			K ₂ O 10	Band (Starter)*	K ₂ O 10	Band (2x2) *	K ₂ O 0			
			Cl		Cl		Cl			
			S 0		S 0		S 10	Band		
			B		B		B			
			Zn 0		Zn 0		Zn 0			
			Fe		Fe		Fe			
			Mn		Mn		Mn			
			Cu		Cu		Cu			
			Mg		Mg		Mg			
			Lime		Lime		Lime			
			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
						% Ca	% Mg	% K	% Na	% H
			0-6" 7.5							
			6-24" 8.1							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 30 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

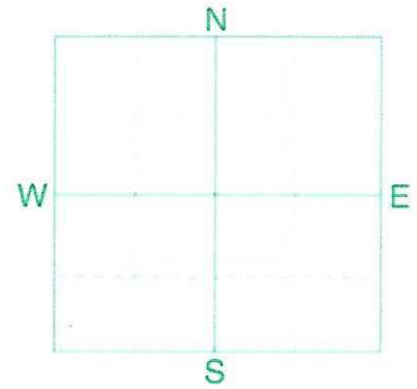


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SOIL TEST REPORT

FIELD ID **10** Field # 9.
 SAMPLE ID **10**
 FIELD NAME
 COUNTY
 TWP **ne/se 29-1-** RANGE
1 e
 SECTION QTR ACRES **64**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2346427** BOX # **1521**
 LAB # **NW53520**

Date Sampled **08/30/2018** Date Received **09/01/2018** Date Reported **9/5/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		VLow	Low	Med	High						
Nitrate	0-6" 17 lb/ac	*****				Canola-bu		Soybeans		Beans-Edible	
	6-24" 9 lb/ac					YIELD GOAL		YIELD GOAL		YIELD GOAL	
	0-24" 26 lb/ac					60 BU		50 BU		2000 LBS	
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
					Band/Maint.		Band/Maint.		Band/Maint.		
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Phosphorus	Olsen 30 ppm	*****	*****	*****	*****	N 184	N ***	N 74	N	74	
Potassium	528 ppm	*****	*****	*****	*****	P ₂ O ₅ 54 Band *	P ₂ O ₅ 44 Band *	P ₂ O ₅ 28 Band *	P ₂ O ₅	28	
Chloride						K ₂ O 0	K ₂ O 0	K ₂ O 0	K ₂ O	0	
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	*****	*****	*****	*****	Cl	Cl	Cl	Cl		
Boron						S 10 Band	S 0	S 0	S	0	
Zinc	3.87 ppm	*****	*****	*****	*****	B	B	B	B		
Iron						Zn 0	Zn 0	Zn 0	Zn	0	
Manganese						Fe	Fe	Fe	Fe		
Copper						Mn	Mn	Mn	Mn		
Magnesium						Cu	Cu	Cu	Cu		
Calcium						Mg	Mg	Mg	Mg		
Sodium						Lime	Lime	Lime	Lime		
Org.Matter	6.4 %	*****	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)	
Carbonate(CCE)						Buffer pH		% Ca	% Mg	% K	% Na
Sol. Salts	0-6" 1.11 mmho/cm 6-24" 2.67 mmho/cm	*****	*****	*****	*****	6-24" 8.2		% H			

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 54 K2O = 27 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
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 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 8 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

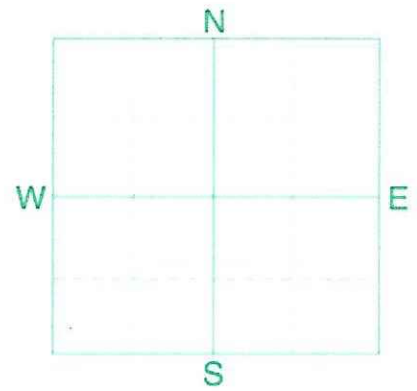


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 (http://www.agvise.com)
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SOIL TEST REPORT

FIELD ID **09** Field # 10.
 SAMPLE ID **9**
 FIELD NAME
 COUNTY
 TWP **nw/sw 29-1-1 e** RANGE
 SECTION QTR ACRES **48**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
Voth Farms
 Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2346426** BOX # **1703**
 LAB # **NW53517**

Date Sampled **08/30/2018** Date Received **09/01/2018** Date Reported **9/5/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6" 26 lb/ac					Canola-bu		Soybeans		Beans-Edible				
	6-24" 15 lb/ac					YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24" 41 lb/ac	*****				60 BU		50 BU		2000 LBS				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
Olsen Phosphorus	21 ppm	*****	*****	*****	*****	Band/Maint.		Band/Maint.		Band/Maint.				
Potassium	318 ppm	*****	*****	*****	*****	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Chloride						N	169	N	***	N	59			
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	*****	*****	*****	*****	P ₂ O ₅	54 Band *	P ₂ O ₅	44 Band *	P ₂ O ₅	28 Band *			
Boron						K ₂ O	0	K ₂ O	0	K ₂ O	0			
Zinc	1.99 ppm	*****	*****	*****	*****	Cl		Cl		Cl				
Iron						S	10 Band	S	0	S	0			
Manganese						B		B		B				
Copper						Zn	0	Zn	0	Zn	2 Band (Trial)			
Magnesium						Fe		Fe		Fe				
Calcium						Mn		Mn		Mn				
Sodium						Cu		Cu		Cu				
Org.Matter	5.6 %	*****	*****	*****	*****	Mg		Mg		Mg				
Carbonate(CCE)						Lime		Lime		Lime				
Sol. Salts	0-6" 1.2 mmho/cm	*****	*****	*****	*****	Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24" 1.98 mmho/cm	*****	*****	*****	*****	0-6" 7.5			% Ca	% Mg	% K	% Na	% H	
						6-24" 8.1								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 54 K2O = 27 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
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 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

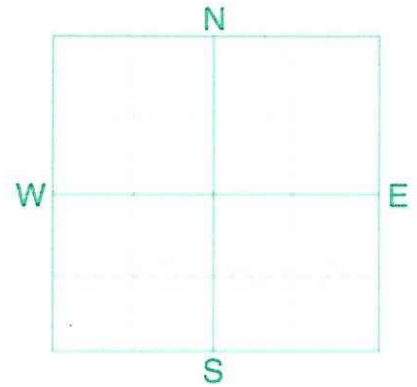


GJ Chemical Co.

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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **08** Field # 11.
 SAMPLE ID **8**
 FIELD NAME
 COUNTY
 TWP **nw 29-1-1 e**RANGE
 SECTION **QTR** ACRES **91**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2346425** BOX # **1703**
 LAB # **NW53512**

Date Sampled **08/30/2018** Date Received **09/01/2018** Date Reported **9/5/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		VLow	Low	Med	High						
Nitrate	0-6" 16 lb/ac					Canola-bu		Soybeans		Beans-Edible	
	6-24" 15 lb/ac					YIELD GOAL		YIELD GOAL		YIELD GOAL	
	0-24" 31 lb/ac	*****				60 BU		50 BU		2000 LBS	
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Olsen Phosphorus	24 ppm	*****	*****	*****	*****	Band/Maint.		Band/Maint.		Band/Maint.	
Potassium	372 ppm	*****	*****	*****	*****	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
Chloride	0-6" 120 +lb/ac					N	179	N	***	N	69
	6-24" 360 +lb/ac	*****	*****	*****	*****	P ₂ O ₅	54 Band *	P ₂ O ₅	44 Band *	P ₂ O ₅	28 Band *
Sulfur						K ₂ O	0	K ₂ O	0	K ₂ O	0
Boron						Cl		Cl		Cl	
Zinc	3.19 ppm	*****	*****	*****	*****	S	10 Band	S	0	S	0
Iron						B		B		B	
Manganese						Zn	0	Zn	0	Zn	0
Copper						Fe		Fe		Fe	
Magnesium						Mn		Mn		Mn	
Calcium						Cu		Cu		Cu	
Sodium						Mg		Mg		Mg	
Org.Matter	6.0 %	*****	*****	*****	*****	Lime		Lime		Lime	
Carbonate(CCE)						Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)	
Sol. Salts	0-6" 0.76 mmho/cm	*****	*****	*****	*****	Buffer pH		% Ca	% Mg	% K	% Na
	6-24" 1.37 mmho/cm	*****	*****	*****	*****	0-6" 7.5		% K	% Na	% H	
						6-24" 8.1					

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 54 K2O = 27 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
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 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

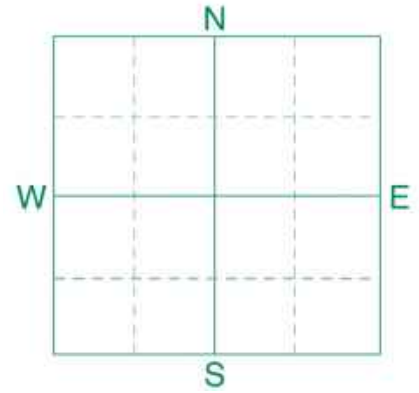


GJ Chemical Co._{INC.}

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

SOIL TEST REPORT

FIELD ID **6** Field # 12.
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **SW 30-1-1E** RANGE
 SECTION QTR ACRES **70**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
JOHN ISAAK

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
JCT HWY 30 & RD 9N 1
BOX 1648
ALTONA, MB **ROG OBO**

REF # **19512201** BOX # **0**
 LAB # **NW164797**

Date Sampled **10/25/2017**

Date Received **10/26/2017**

Date Reported **10/31/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High										
Nitrate	0-6" 6-24"	24 lb/ac 12 lb/ac	*****				Soybeans	Canola-bu		Beans-Edible					
	0-24"	36 lb/ac					YIELD GOAL	YIELD GOAL		YIELD GOAL					
							50 BU	50 BU		2000 LBS					
							SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
							Band/Maint.	Band/Maint.		Band/Maint.					
Phosphorus	Olsen	18 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium		358 ppm	*****				N	***	N	139	N	64			
Chloride							P ₂ O ₅	44	Band *	P ₂ O ₅	45	Band *	P ₂ O ₅	28	Band *
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****				K ₂ O	0		K ₂ O	0		K ₂ O	0	
Boron							Cl			Cl			Cl		
Zinc		2.50 ppm	*****				S	0		S	10	Band	S	0	
Iron							B			B			B		
Manganese							Zn	0		Zn	0		Zn	0	
Copper							Fe			Fe			Fe		
Magnesium							Mn			Mn			Mn		
Calcium							Cu			Cu			Cu		
Sodium							Mg			Mg			Mg		
Org.Matter		5.4 %	*****				Lime			Lime			Lime		
Carbonate(CCE)							Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)					
										% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 6-24"	0.83 mmho/cm 1.7 mmho/cm	*****				0-6" 7.3								
			*****				6-24" 8.0								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

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 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

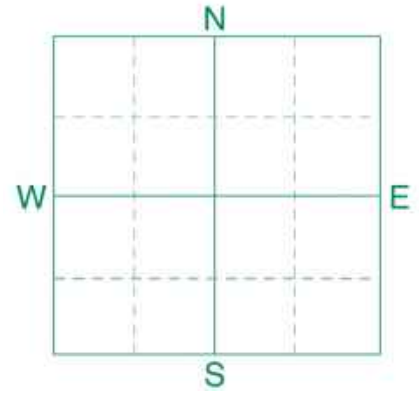


GJ Chemical Co.^{INC.}

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 Northwood: (701) 587-6010
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SOIL TEST REPORT

FIELD ID **7** Field # 13.
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **NW 19-1-1E** RANGE
 SECTION QTR ACRES **82**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
ISAAK, JOHN

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
JCT HWY 30 & RD 9N 1
BOX 1648
ALTONA, MB **ROG OBO**

REF # **19512245** BOX # **0**
 LAB # **NW159889**

Date Sampled **10/24/2017**

Date Received **10/25/2017**

Date Reported **10/30/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice					
		VLow	Low	Med	High										
Nitrate	0-6" 6-24"	29 lb/ac 21 lb/ac	*****				Soybeans		Canola-bu		Beans-Edible				
	0-24"	50 lb/ac					YIELD GOAL		YIELD GOAL		YIELD GOAL				
							50 BU		50 BU		2000 LBS				
							SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
							Band/Maint.		Band/Maint.		Band/Maint.				
	Olsen	25 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus						N	***		N	125		N	50		
Potassium		390 ppm	*****			P ₂ O ₅	44	Band *	P ₂ O ₅	45	Band *	P ₂ O ₅	28	Band *	
Chloride						K ₂ O	0		K ₂ O	0		K ₂ O	0		
Sulfur	0-6" 6-24"	120 +lb/ac 360 +lb/ac	*****			Cl			Cl			Cl			
Boron						S	0		S	10	Band	S	0		
Zinc		2.95 ppm	*****			B			B			B			
Iron						Zn	0		Zn	0		Zn	0		
Manganese						Fe			Fe			Fe			
Copper						Mn			Mn			Mn			
Magnesium						Cu			Cu			Cu			
Calcium						Mg			Mg			Mg			
Sodium						Lime			Lime			Lime			
Org.Matter		5.9 %	*****			Soil pH		Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)											% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 6-24"	1.23 mmho/cm 2.65 mmho/cm	*****			0-6"	7.2								
						6-24"	8.0								

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

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 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

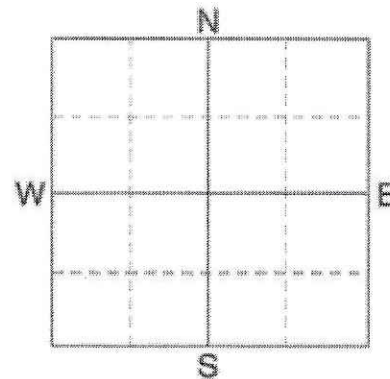


GJ Chemical Co.^{INC.}

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

SOIL TEST REPORT

FIELD ID **25** Field # **14.**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **nw 19-1-1 e** RANGE
 SECTION **QTR** ACRES **82**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2444769** BOX # **11850**
 LAB # **NW120873**

Date Sampled

Date Received **10/11/2018**

Date Reported **10/13/2018**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		V Low Low Med High	Canola-bu		Beans-Edible		Soybeans	
	0-6" 82 lb/ac		YIELD GOAL		YIELD GOAL		YIELD GOAL	
	6-24" 39 lb/ac		50 BU		2000 LBS		50 BU	
	0-24" 121 lb/ac		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
Nitrate			Band/Maint.		Band/Maint.		Band/Maint.	
	Olsen 16 ppm		LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
Phosphorus			N	54	N	0	N	***
Potassium	466 ppm		P ₂ O ₅	45 Band *	P ₂ O ₅	28 Band *	P ₂ O ₅	44 Band *
Chloride			K ₂ O	0	K ₂ O	0	K ₂ O	0
	0-6" 74 lb/ac		Cl		Cl		Cl	
	6-24" 360 +lb/ac		S	10 Band	S	0	S	0
Sulfur			B		B		B	
Boron			Zn	0	Zn	2 Band (Trial)	Zn	0
Zinc	1.68 ppm		Fe		Fe		Fe	
Iron			Mn		Mn		Mn	
Manganese			Cu		Cu		Cu	
Copper			Mg		Mg		Mg	
Magnesium			Lime		Lime		Lime	
Calcium			Soil pH		Buffer pH		% Base Saturation (Typical Range)	
Sodium			Capacity		Capacity		% Ca	% Mg
Org Matter	6.3 %						% K	% Na
Carbonate(CCE)							% H	
	0-6" 1.06 mmho/cm		0-6"	7.2				
	6-24" 3.44 mmho/cm		6-24"	8.0				
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 = 45 K20 = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

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 = 28 K20 = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K20 = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

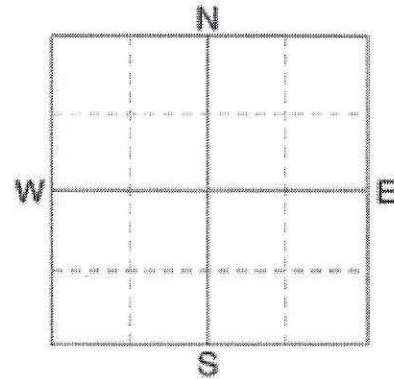


GJ Chemical Co.

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 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **22** Field # 15.
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **sw 19-1-1 e** RANGE
 SECTION **QTR** ACRES **90**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2444765** BOX # **11852**
 LAB # **NW120872**

Date Sampled

Date Received **10/11/2018**

Date Reported **10/13/2018**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice						
Nitrate	0-6" 43 lb/ac	*****	Canola-bu		Beans-Edible		Soybeans						
	6-24" 21 lb/ac		YIELD GOAL		YIELD GOAL		YIELD GOAL						
	0-24" 64 lb/ac		50 BU		2000 LBS		50 BU						
SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES							
Band/Maint.		Band/Maint.		Band/Maint.		Band/Maint.							
Phosphorus	Olsen 26 ppm	*****	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION					
			N 111		N 36		N ***						
Potassium	418 ppm	*****	P ₂ O ₅ 45	Band *	P ₂ O ₅ 28	Band *	P ₂ O ₅ 44	Band *					
Chloride			K ₂ O 0		K ₂ O 0		K ₂ O 0						
Sulfur	0-6" 120 +lb/ac	*****	Cl		Cl		Cl						
	6-24" 360 +lb/ac		S 10	Band	S 0		S 0						
Boron			B		B		B						
Zinc	2.07 ppm	*****	Zn 0		Zn 0		Zn 0						
Iron			Fe		Fe		Fe						
Manganese			Mn		Mn		Mn						
Copper			Cu		Cu		Cu						
Magnesium			Mg		Mg		Mg						
Calcium			Lime		Lime		Lime						
Sodium													
Org.Matter	6.0 %	*****	Soil pH		Buffer pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)			0-6" 7.3						% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 1.09 mmho/cm	*****	6-24" 7.9										

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

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 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

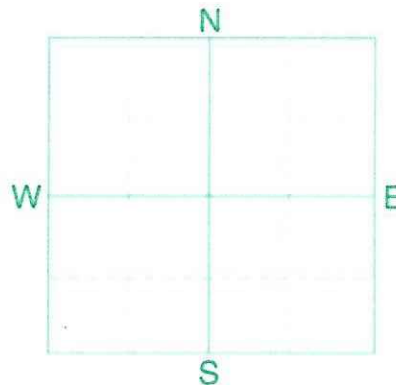


GJ Chemical Co.

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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **24ABC** Field # 16.
 SAMPLE ID **24**
 FIELD NAME
 COUNTY
 TWP **se 24-1-1** RANGE
w
 SECTION QTR ACRES **151**
 PREV. CROP **Peas-Field**



SUBMITTED FOR:
Voth Farms

Altona,

SUBMITTED BY: **GJ4376**
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2346430** BOX # **1722**
 LAB # **NW53524**

Date Sampled **08/30/2018** Date Received **09/01/2018** Date Reported **9/5/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High							
Nitrate	0-6" 11 lb/ac	****				Canola-bu		Soybeans		Beans-Edible		
	6-24" 9 lb/ac		YIELD GOAL		YIELD GOAL		YIELD GOAL					
	0-24" 20 lb/ac		60 BU		50 BU		2000 LBS					
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
					Band/Maint.		Band/Maint.		Band/Maint.			
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	30 ppm	*****	*****	*****	*****	N 175	N ***	N 65				
Potassium	527 ppm	*****	*****	*****	*****	P ₂ O ₅ 54 Band *	P ₂ O ₅ 44 Band *	P ₂ O ₅ 28 Band *				
Chloride						K ₂ O 0	K ₂ O 0	K ₂ O 0				
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	*****	*****	*****	*****	Cl	Cl	Cl				
Boron						S 10 Band	S 0	S 0				
Zinc	2.58 ppm	*****	*****	*****	*****	B	B	B				
Iron						Zn 0	Zn 0	Zn 0				
Manganese						Fe	Fe	Fe				
Copper						Mn	Mn	Mn				
Magnesium						Cu	Cu	Cu				
Calcium						Mg	Mg	Mg				
Sodium						Lime	Lime	Lime				
Org.Matter	5.7 %	*****	*****	*****	*****	Soil pH		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH	Cation Exchange Capacity	% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 1.74 mmho/cm 6-24" 3.3 mmho/cm	*****	*****	*****	*****	0-6" 7.3 6-24" 7.9						

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 27 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 10 lb/ac with a limited soybean history.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

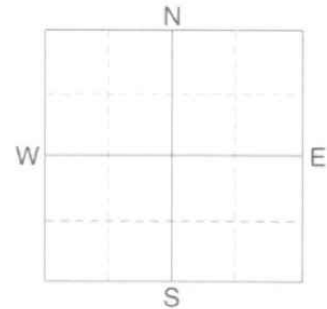


GJ Chemical Co.

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

SOIL TEST REPORT

FIELD ID **07** Field # **17.**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **sw 24-1-1 w RANGE**
 SECTION QTR ACRES **153**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
G&J Farms
Altona,

SUBMITTED BY: GJ4376
GJ CHEMICAL COMPANY
4045 RD 9 NW
BOX 1648
ALTONA, MB **ROG OBO**

REF # **2449733** BOX # **11339**
 LAB # **NW122936**

Date Sampled _____ Date Received **10/13/2018** Date Reported **10/16/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
		High	Med	Low	Flow						
Nitrate	0-6"	30 lb/ac				Canola-bu	Beans-Edible		Soybeans		
	6-24"	12 lb/ac				YIELD GOAL	YIELD GOAL		YIELD GOAL		
						50 BU	2000 LBS		50 BU		
	0-24"	42 lb/ac				SUGGESTED GUIDELINES	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
						Band/Maint.	Band/Maint.		Band/Maint.		
Phosphorus	Olsen	15 ppm				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
Potassium		416 ppm				N 133		N 58		N ***	
Chloride						P ₂ O ₅ 45	Band *	P ₂ O ₅ 28	Band *	P ₂ O ₅ 44	Band *
Sulfur	0-6"	120 +lb/ac				K ₂ O 0		K ₂ O 0		K ₂ O 0	
	6-24"	360 +lb/ac				Cl		Cl		Cl	
Baron						S 10	Band	S 0		S 0	
Zinc		3.50 ppm				B		B		B	
Iron						Zn 0		Zn 0		Zn 0	
Manganese						Fe		Fe		Fe	
Copper						Mn		Mn		Mn	
Magnesium						Cu		Cu		Cu	
Calcium						Mg		Mg		Mg	
Sodium						Lime		Lime		Lime	
Org.Matter		5.7 %				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)	
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K
	0-6"	0.94 mmho/cm							% Na	% H	
Soil Salts	6-24"	1.67 mmho/cm				0-6" 7.4					
						6-24" 7.9					

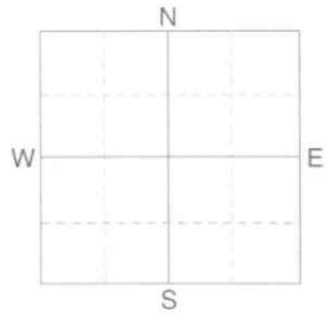
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
 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 = 28 K2O = 28 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 44 K2O = 75 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.



GJ Chemical Co.
 Soil Analysis by Agvise Laboratories
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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **22** Field # **18.**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **nw 13-1-1 w RANGE**
 SECTION QTR ACRES **98**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
G&J Farms
 Altona,

SUBMITTED BY: GJ4376
GJ CHEMICAL COMPANY
 4045 RD 9 NW
 BOX 1648
 ALTONA, MB **ROG OBO**

REF # **2395504** BOX # **4889**
 LAB # **NW88369**

Date Sampled **09/20/2018** Date Received **09/21/2018** Date Reported **9/25/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		Very Low	Low	Med	High	Wheat-Spring		Corn-Grain		Canola-bu			
Nitrate	0-6"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	6-24"					12 lb/ac	9 lb/ac	60 BU	160 BU	50 BU			
	0-24"					21 lb/ac	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
							Band/Maint.		Band/Maint.		Band/Maint.		
	Olsen	25 ppm	*****		LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus			*****		N	126	N	141	N	139			
Potassium		487 ppm	*****		P ₂ O ₅	38 Band *	P ₂ O ₅	64 Band *	P ₂ O ₅	45 Band *			
Chloride			*****		K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (2x2) *	K ₂ O	0			
Sulfur	0-6"	120 +lb/ac	*****		Cl		Cl		Cl				
	6-24"	360 +lb/ac	*****		S	0	S	0	S	10 Band			
Boron			*****		B		B		B				
Zinc		2.60 ppm	*****		Zn	0	Zn	0	Zn	0			
Iron			*****		Fe		Fe		Fe				
Manganese			*****		Mn		Mn		Mn				
Copper			*****		Cu		Cu		Cu				
Magnesium			*****		Mg		Mg		Mg				
Calcium			*****		Lime		Lime		Lime				
Sodium			*****		Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Org.Matter		6.2 %	*****		Buffer pH				% Ca	% Mg	% K	% Na	% H
Carbonate(CCE)			*****										
Sol. Salts	0-6"	0.91 mmho/cm	*****		0-6"	7.3							
	6-24"	2.39 mmho/cm	*****		6-24"	7.8							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 30 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 64 K2O = 43 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.




MMPP - Fertilizer Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ✕

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ✕

Risk Areas

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the  icon to clear all selected items. ✕

RISK AREA 12 

Select Crop(s)

ARGENTINE CANOLA 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



to

Search Summary

20 records returned

3,196 farm varieties grown on **624,627.3** acres

Average Yield

0.970 Tonnes (**42.8** Bushels) per acre

Average Fertilizer Application

Nitrogen: **114.1** lbs per acre

Phosphorus: **34.2** lbs per acre

Potassium: **5.1** lbs per acre

Sulphur: **12.4** lbs per acre

Summary includes aggregate data from 'below minimum tolerance' records

Fertilizer Data

'Below Minimum Tolerance' records contain data from fewer than 3 producers or 500 acres, marked as such to retain producer anonymity. Data from these records is included in the Search Summary totals.

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Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2017	RISK AREA 12	ARGENTINE CANOLA	C	133	26,562.0	54.4 Bushels	124.5	38.3
2017	RISK AREA 12	ARGENTINE CANOLA	D	115	22,836.0	54.4 Bushels	124.7	39.7
2014	RISK AREA 12	ARGENTINE CANOLA	C	153	28,577.0	51.1 Bushels	119.1	36.9

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2014	RISK AREA 12	ARGENTINE CANOLA	D	138	24,328.0	49.8 Bushels	119.6	37.6
2013	RISK AREA 12	ARGENTINE CANOLA	C	172	31,472.0	49.3 Bushels	118.0	33.6
2008	RISK AREA 12	ARGENTINE CANOLA	C	162	30,481.0	48.2 Bushels	106.2	33.1
2013	RISK AREA 12	ARGENTINE CANOLA	D	164	29,602.5	47.5 Bushels	113.6	34.8
2008	RISK AREA 12	ARGENTINE CANOLA	D	152	25,619.0	46.9 Bushels	101.1	31.2
2015	RISK AREA 12	ARGENTINE CANOLA	C	159	31,804.0	45.1 Bushels	125.6	38.2
2009	RISK AREA 12	ARGENTINE CANOLA	D	178	34,981.0	43.8 Bushels	100.8	30.9
2015	RISK AREA 12	ARGENTINE CANOLA	D	138	25,990.0	43.8 Bushels	118.7	39.9
2010	RISK AREA 12	ARGENTINE CANOLA	D	174	32,581.0	43.4 Bushels	109.1	32.5
2009	RISK AREA 12	ARGENTINE CANOLA	C	186	37,929.0	41.7 Bushels	105.8	29.6
2010	RISK AREA 12	ARGENTINE CANOLA	C	192	40,011.6	38.9 Bushels	111.1	31.2
2016	RISK AREA 12	ARGENTINE CANOLA	D	135	26,375.0	38.7 Bushels	120.2	38.8
2016	RISK AREA 12	ARGENTINE CANOLA	C	128	24,522.0	36.4 Bushels	122.6	36.6
2011	RISK AREA 12	ARGENTINE CANOLA	D	204	44,320.2	36.3 Bushels	110.2	32.4
2011	RISK AREA 12	ARGENTINE CANOLA	C	197	45,700.0	33.8 Bushels	113.9	31.7
2012	RISK AREA 12	ARGENTINE CANOLA	C	157	31,355.0	33.1 Bushels	113.8	32.3
2012	RISK AREA 12	ARGENTINE CANOLA	D	159	29,581.0	32.6 Bushels	115.7	34.3

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Risk Areas

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the  icon to clear all selected items. ✕

RISK AREA 12 

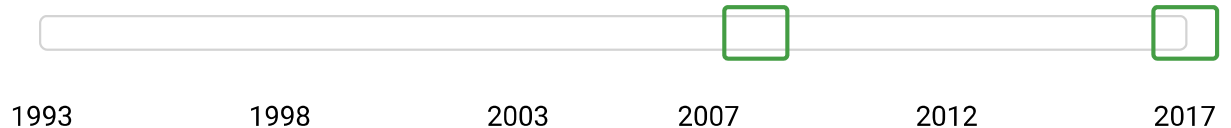
Select Crop(s)

GRAIN CORN 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



to

Search Summary

20 records returned

2,198 farm varieties grown on **443,793.9** acres

Average Yield

3.310 Tonnes (**130.3** Bushels) per acre

Average Fertilizer Application

Nitrogen: **119.2** lbs per acre

Phosphorus: **37.5** lbs per acre

Potassium: **13.5** lbs per acre

Sulphur: **5.4** lbs per acre

Summary includes aggregate data from 'below minimum tolerance' records

Fertilizer Data

'Below Minimum Tolerance' records contain data from fewer than 3 producers or 500 acres, marked as such to retain producer anonymity. Data from these records is included in the Search Summary totals.

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Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2016	RISK AREA 12	GRAIN CORN	C	111	26,380.8	160.5 Bushels	133.3	41.6
2016	RISK AREA 12	GRAIN CORN	D	122	22,299.0	154.4 Bushels	132.4	46.2
2013	RISK AREA 12	GRAIN CORN	D	142	26,165.0	153.7 Bushels	121.7	38.7

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2017	RISK AREA 12	GRAIN CORN	D	124	25,054.0	152.0 Bushels	130.2	43.3
2017	RISK AREA 12	GRAIN CORN	C	108	26,245.0	151.9 Bushels	138.2	41.4
2015	RISK AREA 12	GRAIN CORN	C	79	16,752.0	149.9 Bushels	132.4	38.6
2015	RISK AREA 12	GRAIN CORN	D	99	16,989.0	149.8 Bushels	124.0	42.1
2013	RISK AREA 12	GRAIN CORN	C	122	27,048.0	149.0 Bushels	125.0	35.9
2012	RISK AREA 12	GRAIN CORN	C	109	25,016.0	136.4 Bushels	120.5	34.5
2014	RISK AREA 12	GRAIN CORN	C	104	21,285.0	135.0 Bushels	126.5	42.0
2010	RISK AREA 12	GRAIN CORN	D	91	15,765.0	134.9 Bushels	105.9	34.4
2012	RISK AREA 12	GRAIN CORN	D	134	25,498.0	134.2 Bushels	117.2	37.9
2008	RISK AREA 12	GRAIN CORN	C	109	25,430.0	132.8 Bushels	102.2	33.4
2010	RISK AREA 12	GRAIN CORN	C	96	20,743.0	132.1 Bushels	110.9	32.0
2008	RISK AREA 12	GRAIN CORN	D	123	23,188.0	130.7 Bushels	98.5	34.8
2014	RISK AREA 12	GRAIN CORN	D	113	21,584.0	129.0 Bushels	123.4	40.8
2011	RISK AREA 12	GRAIN CORN	D	117	21,329.0	110.1 Bushels	112.5	33.5
2011	RISK AREA 12	GRAIN CORN	C	94	19,529.1	108.1 Bushels	112.3	31.9
2009	RISK AREA 12	GRAIN CORN	D	107	17,146.0	30.3 Bushels	103.6	32.5
2009	RISK AREA 12	GRAIN CORN	C	94	20,348.0	24.9 Bushels	101.6	31.0

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MMPP - Fertilizer Data Browser

Select Municipalities or MASC Risk Areas

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Risk Areas


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RISK AREA 12 

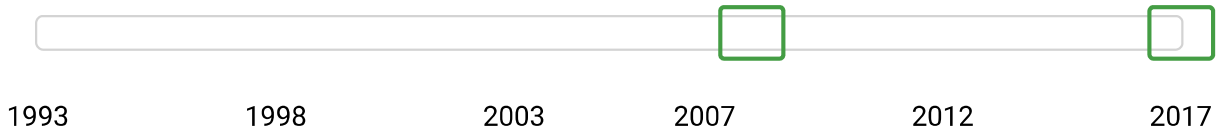
Select Crop(s)

SOYBEANS 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



to

Search Summary

20 records returned

1,348 farm varieties grown on **241,364.0** acres

Average Yield

1.076 Tonnes (**39.5** Bushels) per acre

Average Fertilizer Application

Nitrogen: **6.0** lbs per acre

Phosphorus: **33.3** lbs per acre

Potassium: **5.2** lbs per acre

Sulphur: **1.8** lbs per acre

Summary includes aggregate data from 'below minimum tolerance' records

Fertilizer Data

'Below Minimum Tolerance' records contain data from fewer than 3 producers or 500 acres, marked as such to retain producer anonymity. Data from these records is included in the Search Summary totals.

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Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2016	RISK AREA 12	SOYBEANS	C	105	20,433.0	46.3 Bushels	7.5	34.6
2013	RISK AREA 12	SOYBEANS	C	72	14,210.0	43.5 Bushels	6.0	32.4
2013	RISK AREA 12	SOYBEANS	D	63	10,287.0	43.5 Bushels	5.5	32.7

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2016	RISK AREA 12	SOYBEANS	D	103	18,776.0	42.9 Bushels	5.1	38.3
2010	RISK AREA 12	SOYBEANS	C	38	6,406.0	40.3 Bushels	9.1	25.3
2015	RISK AREA 12	SOYBEANS	D	105	18,090.0	39.4 Bushels	2.7	37.8
2014	RISK AREA 12	SOYBEANS	C	108	22,812.0	39.0 Bushels	4.0	34.3
2010	RISK AREA 12	SOYBEANS	D	43	7,240.0	38.9 Bushels	6.9	24.7
2014	RISK AREA 12	SOYBEANS	D	93	16,441.0	38.9 Bushels	5.2	35.7
2015	RISK AREA 12	SOYBEANS	C	106	19,924.0	38.9 Bushels	4.3	34.8
2012	RISK AREA 12	SOYBEANS	C	47	7,442.0	38.6 Bushels	10.2	26.8
2017	RISK AREA 12	SOYBEANS	C	105	24,359.0	38.2 Bushels	7.5	36.5
2009	RISK AREA 12	SOYBEANS	C	23	3,136.0	38.1 Bushels	11.6	24.0
2012	RISK AREA 12	SOYBEANS	D	63	9,071.0	36.8 Bushels	3.9	29.1
2017	RISK AREA 12	SOYBEANS	D	100	19,137.0	36.8 Bushels	4.0	38.1
2009	RISK AREA 12	SOYBEANS	D	26	3,643.0	35.0 Bushels	11.9	22.7
2008	RISK AREA 12	SOYBEANS	C	35	4,705.0	33.9 Bushels	10.5	25.1
2011	RISK AREA 12	SOYBEANS	D	45	5,033.0	33.6 Bushels	6.3	27.7
2011	RISK AREA 12	SOYBEANS	C	33	5,033.0	33.2 Bushels	11.9	23.3
2008	RISK AREA 12	SOYBEANS	D	35	5,186.0	32.8 Bushels	9.1	23.5

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MMPP - Fertilizer Data Browser

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Risk Areas

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the  icon to clear all selected items. ✕

RISK AREA 12 

Select Crop(s)

RED SPRING WHEAT 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



to

Search Summary

20 records returned

2,711 farm varieties grown on **476,223.6** acres

Average Yield

1.649 Tonnes (**60.6** Bushels) per acre

Average Fertilizer Application

Nitrogen: **101.1** lbs per acre

Phosphorus: **34.2** lbs per acre

Potassium: **7.0** lbs per acre

Sulphur: **3.3** lbs per acre

Summary includes aggregate data from 'below minimum tolerance' records

Fertilizer Data

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Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2017	RISK AREA 12	RED SPRING WHEAT	D	92	16,821.0	78.3 Bushels	112.5	41.1
2017	RISK AREA 12	RED SPRING WHEAT	C	97	17,468.0	78.0 Bushels	116.3	38.8

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2014	RISK AREA 12	RED SPRING WHEAT	C	114	21,138.0	68.5 Bushels	110.3	38.1
2014	RISK AREA 12	RED SPRING WHEAT	D	120	19,057.0	67.7 Bushels	105.3	38.1
2013	RISK AREA 12	RED SPRING WHEAT	D	135	26,265.0	65.6 Bushels	102.2	38.3
2013	RISK AREA 12	RED SPRING WHEAT	C	131	22,333.0	65.1 Bushels	102.6	32.7
2008	RISK AREA 12	RED SPRING WHEAT	D	156	25,715.0	64.3 Bushels	85.0	32.2
2008	RISK AREA 12	RED SPRING WHEAT	C	165	28,240.0	63.6 Bushels	87.8	30.5
2012	RISK AREA 12	RED SPRING WHEAT	C	130	22,154.8	63.3 Bushels	105.1	33.3
2015	RISK AREA 12	RED SPRING WHEAT	C	146	24,434.0	62.5 Bushels	110.7	36.0
2015	RISK AREA 12	RED SPRING WHEAT	D	138	24,279.0	61.8 Bushels	112.0	38.0
2012	RISK AREA 12	RED SPRING WHEAT	D	131	23,117.0	61.4 Bushels	100.4	32.4
2009	RISK AREA 12	RED SPRING WHEAT	C	149	27,267.0	60.5 Bushels	93.7	30.2
2009	RISK AREA 12	RED SPRING WHEAT	D	159	25,824.5	60.3 Bushels	85.9	30.3
2016	RISK AREA 12	RED SPRING WHEAT	C	114	20,548.0	55.6 Bushels	114.0	37.5
2010	RISK AREA 12	RED SPRING WHEAT	D	162	29,979.2	54.3 Bushels	94.8	33.4

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)
2016	RISK AREA 12	RED SPRING WHEAT	D	124	18,725.0	54.0 Bushels	109.6	38.9
2010	RISK AREA 12	RED SPRING WHEAT	C	149	28,587.0	52.5 Bushels	99.7	31.4
2011	RISK AREA 12	RED SPRING WHEAT	D	152	24,386.0	46.5 Bushels	92.1	30.3
2011	RISK AREA 12	RED SPRING WHEAT	C	147	29,885.1	45.1 Bushels	101.9	30.7

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Manure Spread Agreement

This agreement made this 19th day of April, 2019

Between Platinum Pork Inc. (Livestock Operator)

And G+S Farm Ltd (Landowner or tenant)

The Landowner or Tenant grants the Livestock Operator full and exclusive rights to applying hog manure onto the described land subject to the following terms and agreements.

1. The Livestock operator agrees to apply manure in such a way that it complies with Environmental regulations and that it follows general soil fertility recommendations.
2. The Landowner or Tenant agrees to allow the Livestock Operator or its agent's full rights of access to the described land for the purpose of soil testing, manure application and other related activities.
3. Should the Landowner decide to sell the land described, the Landowner shall notify the Livestock operator prior to selling so that the Livestock Operator can transfer the existing manure spreading agreement to the new owner if desired.
4. Landowner or Tenant shall pay for 75% of the Nitrogen value of the manure using the fall average 82-0-0 price as the value per lb of Nitrogen.
5. This agreement will remain in effect for a period of 10 years

Listed Land

SW 24-1-1W 153 ac.

NW 13-1-1W 98 ac.

Land Owner Name or Tenant: G+S Farm Ltd

Land Owner or Tenant Signature: [Signature]

Barn Owner Name: PLATINUM PORK INC

Barn Owner Signature: [Signature]

Date: April 19-2019.

Manure Spread Agreement

This agreement made this 19th day of April, 2019

Between PLATINUM PORK INC. (Livestock Operator)

And: JOHN ISAACK (Landowner or tenant)

The Landowner or Tenant grants the Livestock Operator full and exclusive rights to applying hog manure onto the described land subject to the following terms and agreements.

1. The Livestock operator agrees to apply manure in such a way that it complies with Environmental regulations and that it follows general soil fertility recommendations.
2. The Landowner or Tenant agrees to allow the Livestock Operator or its agent's full rights of access to the described land for the purpose of soil testing, manure application and other related activities.
3. Should the Landowner decide to sell the land described, the Landowner shall notify the Livestock operator prior to selling so that the Livestock Operator can transfer the existing manure spreading agreement to the new owner if desired.
4. Landowner or Tenant shall pay for 75% of the Nitrogen value of the manure using the fall average 82-0-0 price as the value per lb of Nitrogen.
5. This agreement will remain in effect for a period of 10 years.

Listed Land

SW 30-1-1E 70 ac.

NW 19-1-1E 82 ac.

Land Owner Name or Tenant: John Isaack

Land Owner or Tenant Signature: [Signature]

Barn Owner Name: PLATINUM PORK INC.

Barn Owner Signature: [Signature]

Date: April 19-2019

JI

Manure Spread Agreement

This agreement made this 19th day of April, 2019

Between Platinum (Livestock Operator)

And: Voth Farms Inc. (Landowner or tenant)

The Landowner or Tenant grants the Livestock Operator full and exclusive rights to applying hog manure onto the described land subject to the following terms and agreements.

1. The Livestock operator agrees to apply manure in such a way that it complies with Environmental regulations and that it follows general soil fertility recommendations.
2. The Landowner or Tenant agrees to allow the Livestock Operator or its agent's full rights of access to the described land for the purpose of soil testing, manure application and other related activities.
3. Should the Landowner decide to sell the land described, the Landowner shall notify the Livestock operator prior to selling so that the Livestock Operator can transfer the existing manure spreading agreement to the new owner if desired.
4. Landowner or Tenant shall pay for 75% of the Nitrogen value of the manure using the fall average 82-0-0 price as the value per lb of Nitrogen.
5. This agreement will remain in effect for a period of 10 years.

Listed Land

NW 29-1-1E 91 ac. ___ SW 19-1-1E 90 ac. ___

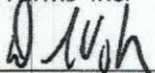
N+SW 29-1-1E 48 ac. ___ SE 24-1-1W 151 ac. ___

SE 29-1-1E 64 ac. ___ NW 19-1-1E 82 ac. ___

SE 29-1-1E 80 ac. ___

SW 20-1-1E 160 ac. ___

Land Owner Name or Tenant: Voth Farms Inc.

Land Owner or Tenant Signature: 

Barn Owner Name: Platinum Pork Inc.

Barn Owner Signature: 

Date: April 19/19

Manure Spread Agreement

This agreement made this 19th day of April, 2019

Between PLATINUM PORK INC. (Livestock Operator)

And: ROSE FIELD FARMS (Landowner or tenant)

The Landowner or Tenant grants the Livestock Operator full and exclusive rights to applying hog manure onto the described land subject to the following terms and agreements.

1. The Livestock operator agrees to apply manure in such a way that it complies with Environmental regulations and that it follows general soil fertility recommendations.
2. The Landowner or Tenant agrees to allow the Livestock Operator or its agent's full rights of access to the described land for the purpose of soil testing, manure application and other related activities.
3. Should the Landowner decide to sell the land described, the Landowner shall notify the Livestock operator prior to selling so that the Livestock Operator can transfer the existing manure spreading agreement to the new owner if desired.
4. Landowner or Tenant shall pay for 75% of the Nitrogen value of the manure using the fall average 82-0-0 price as the value per lb of Nitrogen.
5. This agreement will remain in effect for a period of 10 years.

Listed Land

NE 8-1-1E 160 ac. _____

Land Owner Name or Tenant: Rose Field Farms

Land Owner or Tenant Signature: [Signature]

Barn Owner Name: PLATINUM PORK INC.

Barn Owner Signature: [Signature]

Date: April 19-2019.

Manure Spread Agreement

This agreement made this 18 day of APRIL, 2019

Between Platinum Park Inc (Livestock Operator)

And: B+S Farms (Landowner or tenant)

The Landowner or Tenant grants the Livestock Operator full and exclusive rights to applying hog manure onto the described land subject to the following terms and agreements.

1. The Livestock operator agrees to apply manure in such a way that it complies with Environmental regulations and that it follows general soil fertility recommendations.
2. The Landowner or Tenant agrees to allow the Livestock Operator or its agent's full rights of access to the described land for the purpose of soil testing, manure application and other related activities.
3. Should the Landowner decide to sell the land described, the Landowner shall notify the Livestock operator prior to selling so that the Livestock Operator can transfer the existing manure spreading agreement to the new owner if desired.
4. Landowner or Tenant shall pay for 75% of the Nitrogen value of the manure using the fall average 82-0-0 price as the value per lb of Nitrogen.
5. This agreement will remain in effect for a period of 10 years.

Listed Land

NE 16-1-1E 83 ac.	✓
NW 16-1-1E 224 ac	✓
SNW 15-1-1E 80 ac.	✓
NE 17-1-1E 160 ac.	✓
SW SE 9-1-1E 306 ac.	✓

Land Owner Name or Tenant: B+S Farms / Eldon Klippenstein

Land Owner or Tenant Signature: [Signature]

Barn Owner Name: Platinum Park Inc.

Barn Owner Signature: [Signature]

Date: APRIL 18/19