

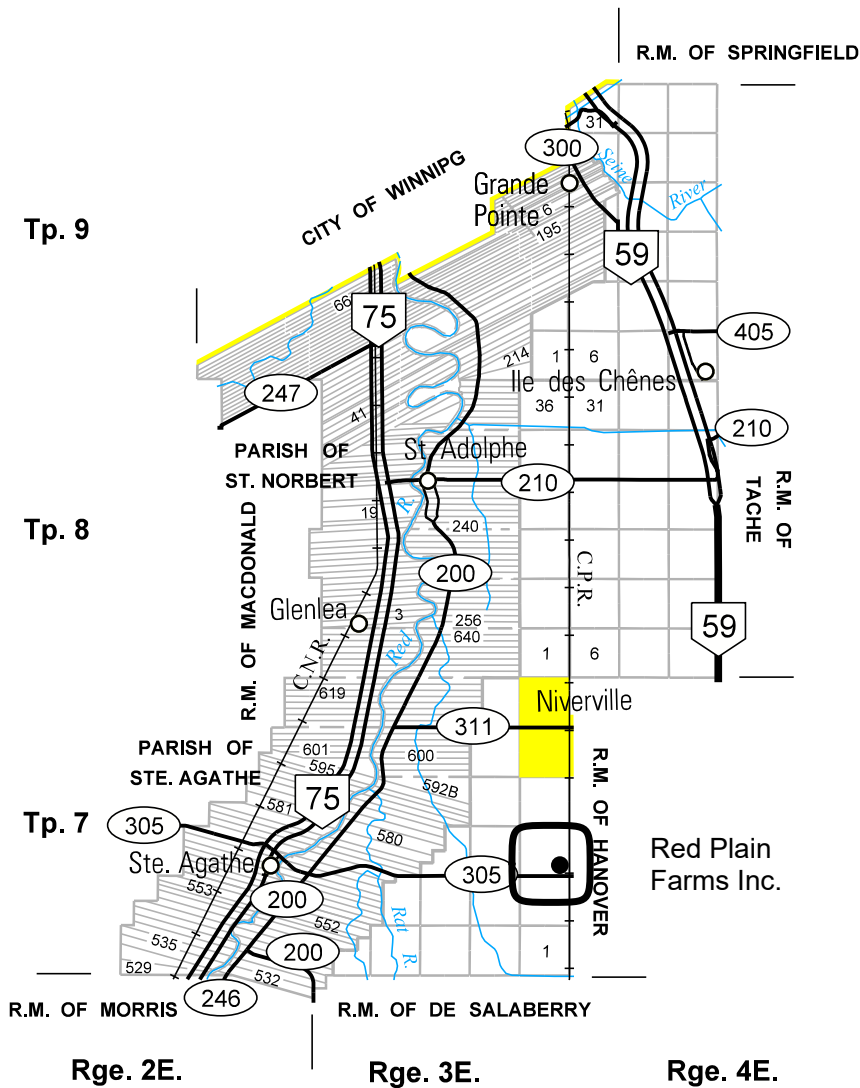


R.M. OF RITCHOT

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

LEGEND

PROVINCIAL TRUNK HIGHWAYS		ACCESS ROADS	
PROVINCIAL ROADS		RAILWAYS	





Niverville

Red Plain Farms

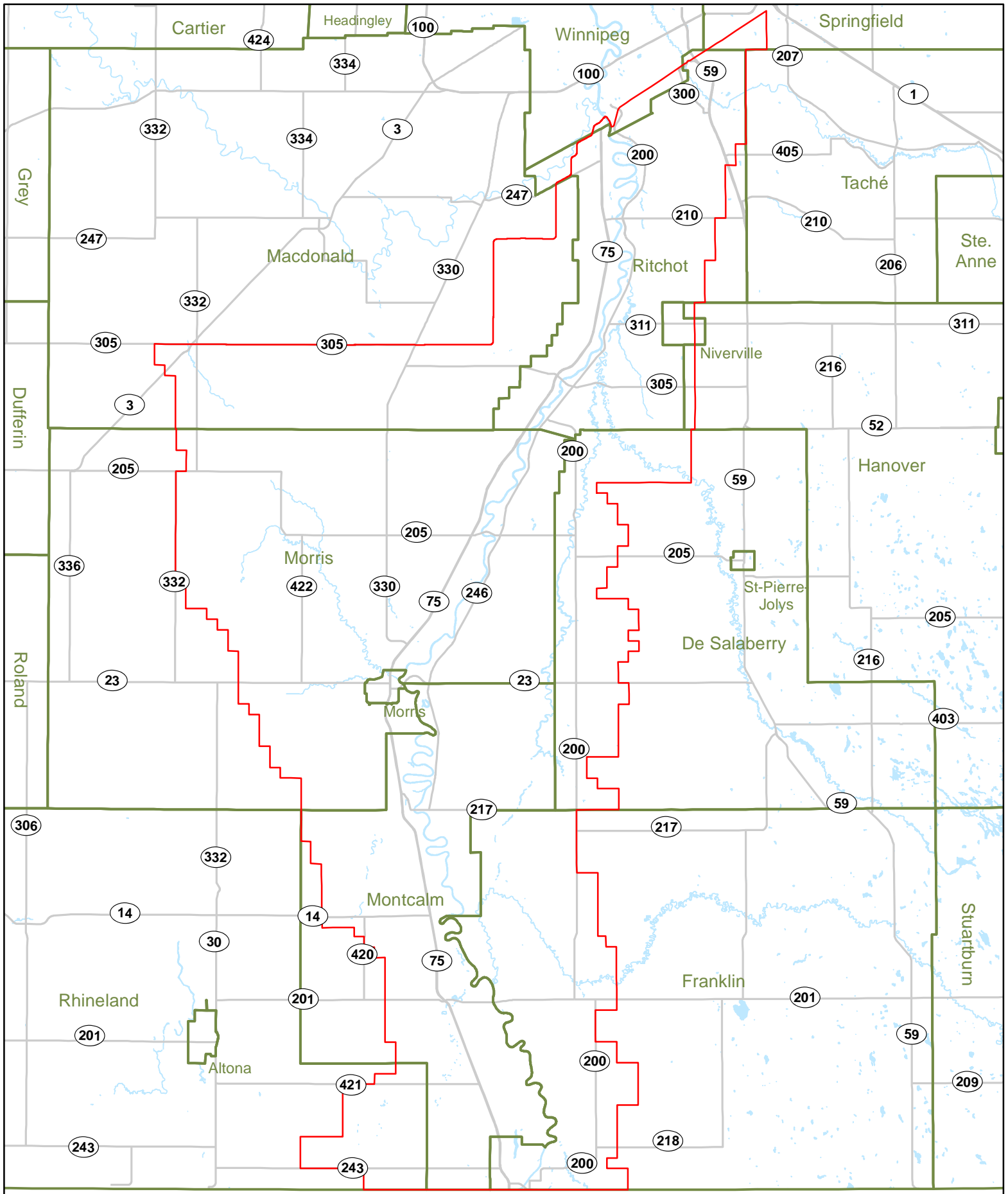


Google Earth

Red Plain Farms – Site Location



Site Plan - Red Plain Farms Inc.



Upper Red River Designated Flood Area

- ▭ Municipal Boundaries
- ▬ Provincial Roadways
- ▭ Designated Flood Area

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		-		-
Beef	Veal calves	0.13		-		-
	Beef cows including associated livestock	1.25		-		-
	Backgrounder	0.5		-		-
	Summer pasture / replacement heifers	0.625		-		-
Pigs	Feeder cattle	0.769		-		-
	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weaning (up to 11 lbs)	0.25		-		-
	Sows - farrow to nursery (51 lbs)	0.313		-		-
	Boars (artificial insemination units)	0.2		-		-
	Weanlings, Nursery (11-51 lbs)	0.033		-		-
	Growers / Finishers (51-249 lbs)	0.143	2,500	358	5,000	715
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:				358	Total Proposed:	715

Footnotes:

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

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

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

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



Water Requirement Calculation Table

Livestock	Number	IG/day per animal in winter	IG/day per animal in summer	IG/day (Imperial gallons per day)
Beef/Dairy/Bison *				
Feeder/heifer/steer (600 lb.)		5	9	-
Feeder (900 lb.)		7	12	-
Feeder (1250 lb.)		10	15	-
Cow/calf pair		12	15	-
Dry milking cow **		10	12	-
Lactating cow **		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)		6.5		-
Dry Sow/Boar		4		-
Feeder	5,000	3		15,000
Nursery (33 lb.)		2		-
Chickens				
Broilers		0.035		-
Roasters/Pullets		0.04		-
Layers		0.055		-
Breeders		0.07		-
Turkeys				
Turkey Growers		0.13		-
Turkey Heavies		0.16		-
Sheep/Goats				
Sheep/Goats		2		-
Ewes/Does		3		-
Lambs/Kids (90 lb.)		1.6		-
TOTAL (IG/day)				15,000
TOTAL with 10% wash water				16,500

* 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

Unit Conversions		
Total per day	Total per year	Unit
16,500	6,022,500	IG
68,190	24,889,350	litres
0.068	25	cubic decametres (dam ³)

Enter this number on page 7 of Application Form.

Conversion Factor: 1 IGPM = 4.546 l/m

Other consumption:

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

Animal Type (A)	Animal Sub-type (B)	Daily Manure Production				Production Period ² (Days) (G)	Number of Animals ³ (Capacity) (H)	Total Manure Volume (ft ³) (FxGxH)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)		
		References (C)	Manure Type (D)	Default Manure Production (ft ³ /animal/day) (E)	Operation Manure Production ¹ (ft ³ /animal/day) (F)						
Dairy (milking cows ⁴ and associated livestock)	Free Stall	Table 6, pg 59, FPGs for Dairy 1995	Semi-Solid ⁵	3.5				-	0.0		
			Solid	3.4				-			
			Liquid ⁵	3.5				-	0.0		
	Tie Stall		Semi-Solid ⁵	3.6					-	0.0	
			Solid	3.5					-		
			Liquid ⁵	3.6					-	0.0	
	Loose Housing			Solid	3.0				-		
Milking Parlour Manure and Washwater		Liquid	0.5								
Beef	Beef cows including associated livestock	pg 117, FPGs for Hogs 1998	Solid	1.2				-			
	Backgrounder (200 day)		Solid	0.73				-			
	Summer pasture / replacement heifers		Solid	0.85				-			
	Feeder cattle		Solid	1.1				-			
Pigs	Sows - farrow to finish (234 - 254 lbs)	MAFRI website, FPGs for Pigs 2007	Liquid	2.3				-	0.0		
	Sows - farrow to wean (up to 11 lbs)		Liquid	0.8				-	0.0		
	Sows - farrow to nursery (51 lbs)		Liquid	1				-	0.0		
	Weanlings, Nursery (11 - 51 lbs)		Liquid	0.1				-	0.0		
	Grower / Finisher (51 - 249 lbs)		Liquid	0.25	0.25	365.00	5,000	456,250.00	2,842,437.5		
Animal Type	Type of Operation	Yearly Manure Production		Production Period ² (Days)	Number of Birds ³ (Capacity)	Total Manure Volume (ft ³) (F/365xGxH)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)				
		Default Manure Production (ft ³ /year/bird space)	Operation Manure Production ¹ (ft ³ /year/bird space)								
Chickens	Broilers – floor ⁶	Table 3, pg 85, FPGs for Poultry 2000		1.23				-			
	Broiler breeder hens ⁷			2.3				-			
	Broiler breeder pullets ⁶			0.99					-		
	Roasters – floor ⁶			1.16					-		
	Layers – cage ⁸			2.33					-	0.0	
	Layers – floor ⁷			1.68					-		
	Layers – solid pack ⁹								-		
	Pullets – cage ⁸				0.71					-	0.0
	Pullets – floor ⁶				0.75					-	
Pullets – solid pack ⁹								-			
Turkeys	Broilers ⁶	Table 3, pg 85, FPGs for Poultry 2000		2.83					-		
	Heavy toms ⁶			5.58					-		
	Heavy hens ⁶			3.32						-	

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

Instructions and footnotes:

- ¹ ENTER the manure production estimate for your operation. If no estimate is available, use the default value provided in column E. References for default daily and yearly manure production are provided in column C.
- ² ENTER the number of days worth of manure that will be produced. For earthen manure storage facilities the minimum storage requirement is 400 days. For steel and concrete manure storage facilities the minimum storage requirement is 250
- ³ ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).
- ⁴ Milking cows includes all lactating and dry cows.
- ⁵ Default manure production estimates for semi-solid and liquid dairy manure include manure and washwater from the milking parlour.
- ⁶ 2 inches of wood shavings or 4 inches of straw placed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/ft³
- ⁷ One-third litter floor, two-thirds slatted floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/ft³
- ⁸ Manure removed from barn at 90% moisture content with a density of 59 lb/ft³
- ⁹ Poultry operations using litter (solid pack) must provide an estimate of yearly manure production

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	105 ft	175 ft	16 ft	4 ft	3:1	5:1	
Secondary	315 ft	175 ft	15 ft	4 ft	3:1	5:1	Total combined 421 days of storage
Tertiary	ft	ft	ft	ft			
Circular Tank		Diameter	Height	Depth (Above Grade)			
		ft	ft	ft			

Permit/Registration # _____





Truck Haul Route

Legal Primary	Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC
NE and SE-13-007-03E1	No listed or tracked species occurrences found at this time						
SW-24-007-03E1	No listed or tracked species occurrences found at this time						
SW-01-007-03E1	No listed or tracked species occurrences found at this time						
NE and SE 01-007-03E1	No listed or tracked species occurrences found at this time						
SE-23-007-03E1	No listed or tracked species occurrences found at this time						
S1/2 SE-13-007-03E1	No listed or tracked species occurrences found at this time						
W1/2 NE-12-007-03E1	No listed or tracked species occurrences found at this time						
E1/2 NE-12-007-03-E1	No listed or tracked species occurrences found at this time						

Legal Peripheral	Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC
SW-18-007-04E1	Vertebrate Animal	Hirundo rustica	(Barn Swallow)	S4B	NA	Threatened	Threatened
SW-18-007-04E1	Vertebrate Animal	Dolichonyx oryzivorus	(Bobolink)	S4B	NA	Threatened	Threatened
NW-07-007-04E1	Vertebrate Animal	Hirundo rustica	(Barn Swallow)	S4B	NA	Threatened	Threatened
NW-07-007-04E1	Vertebrate Animal	Dolichonyx oryzivorus	(Bobolink)	S4B	NA	Threatened	Threatened

Access Roads and Road Allowances	Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC
Mile road segment south adjacent to SW-18-007-04E1	Vertebrate Animal	Hirundo rustica	(Barn Swallow)	S4B	NA	Threatened	Threatened
Mile road segment south adjacent to SW-18-007-04E1	Vertebrate Animal	Dolichonyx oryzivorus	(Bobolink)	S4B	NA	Threatened	Threatened

General Area Records	Category	Scientific Name	Common Name	S Rank	ESEA	SARA	COSEWIC
Low Locational Accuracy							
Vascular Plant	Asclepias verticillata	(Whorled Milkweed)	S3	NA	NA	NA	

Notes

Is S1/2 SE-13-007-03E1 a duplicate of SE-13-007-03E1?

SE-01-007-03E1 is referenced in the table but only the N1/2 is shown outlined in red on the map. All of the SE quarter was searched though.

Species at Risk Report

Pig/Operation Type	Storage Type	Volatilization	Animal Numbers (Places)	Weight In (lb)	Weight Out (lb)	Average Animal Wt (lb)	Days on Feed per Cycle (days)	Number of Cycles for the Place per Year (days)	Feed Consumed Per Pig Per Day (kg/day)	Protein %	N Excreted Per Herd Adjusted for Storage N (lb/yr/herd)	Phosphorus Content of Feed (DM) %	P2O5 Excreted Per Herd Per Year (lb/yr/herd)
Gestating Sow	Liquid Uncovered Earthen	30%	5000	447	630	539	121	3	2.3	14%	0	0.53%	0
Nursing Sow	Liquid Uncovered Earthen	30%		539	539	539	21	15.2	6.5	20%	0	0.63%	0
Nursing Litter	Liquid Uncovered Earthen	30%		3.1	13.6	8	21	15.2	0	n/a	0	n/a	0
Live Cull Sow	Liquid Uncovered Earthen	30%		630	630	630	14	26.1	2.3	14%	0	0.46%	0
Bred Gilt	Liquid Uncovered Earthen	30%		340	447	394	121	3	2.3	14%	0	0.53%	0
Gilts (Purchased)	Liquid Uncovered Earthen	30%		290	340	315	28	13.0	3.2	16%	0	0.46%	0
Boars (Purchased)	Liquid Uncovered Earthen	30%		270	660	465	365	1	2.5	14%	0	0.46%	0
Weanlings	Liquid Uncovered Earthen	30%		13.6	61.6	38	52	6.9	0.7	20%	0	0.64%	0
Growers/Finishers	Liquid Uncovered Earthen	30%		61.6	280	171	112	3	2.8	16%	129547	0.46%	64005
Sows, farrow to 6.2 kg	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%		n/a	n/a	n/a	365	1	n/a	n/a	0	n/a	0

Last Revised April 13, 2016

Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake
	P2O5	N	N	Units				P2O5 (lb)	N (lb)	N (lb)
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	42.8	bu/ac	315	14021	26020	43008
Corn Grain	0.44	0.97	1.53	lb/bu	130.3	bu/ac	465	26659	58772	92702
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	81	2688	12382	16637
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	60.6	bu/ac	240	8581	21816	30688
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
Sub Total							1101	51949	118990	183035
Estimated Average Removal/Uptake (lb/ac)								47.2	108.1	166.2
Additional Acres										
Crop Planned on Additional Acres										
Total Acreage							1101			

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

Last revised August 20, 2014

Species	Animal Category/Operation type	N	P2O5
		(lb/year)	(lb/year)
Pigs	Gestating Sow	0	0
	Nursing Sow	0	0
	Nursing Litter	0	0
	Live Cull Sows	0	0
	Bred Gilts	0	0
	Gilts	0	0
	Boars	0	0
	Weanlings	0	0
	Growers/finishers	129547	64005
	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
Beef	Mature Cows (>2 years old)	0	0
	Bred Heifer (14 mo - 2 years)	0	0
	Replacement Heifers (7 mo-14 mo)	0	0
	Unweaned Calves (0-7 mo)	0	0
	Bulls	0	0
	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Lactating cow	0	0
	Dry cow	0	0
	Calf, 0-3 months	0	0
	Calf, 4-13 months	0	0
	Replacements, >13 months	0	0
	Mature Cows, plus assoc livestock	0	0
Sheep	Ewes	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		129547	64005

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

Nutrients Excreted		lbs
Nitrogen		129547
P2O5		64005
Crop Nutrient Use		lb/ac
Nitrogen Uptake		166.2
P2O5 Removal		47.2
Land Base Requirements		acres
Acres for Nitrogen Uptake		779
Acres for 2 x P2O5 Removal		678
Acres for 1 x P2O5 Removal		1357

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Grain Corn	465	130.3	Bu./acre	MASC Risk Areas & Soil
Canola	315	42.8	Bu./acre	MASC Risk Areas & Soil
Wheat	240	60.6	Bu./acre	MASC Risk Areas & Soil
Soybeans	81	39.5	Bu./acre	MASC Risk Areas & Soil
Total Net Acreage for Manure Application	1101			

- 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

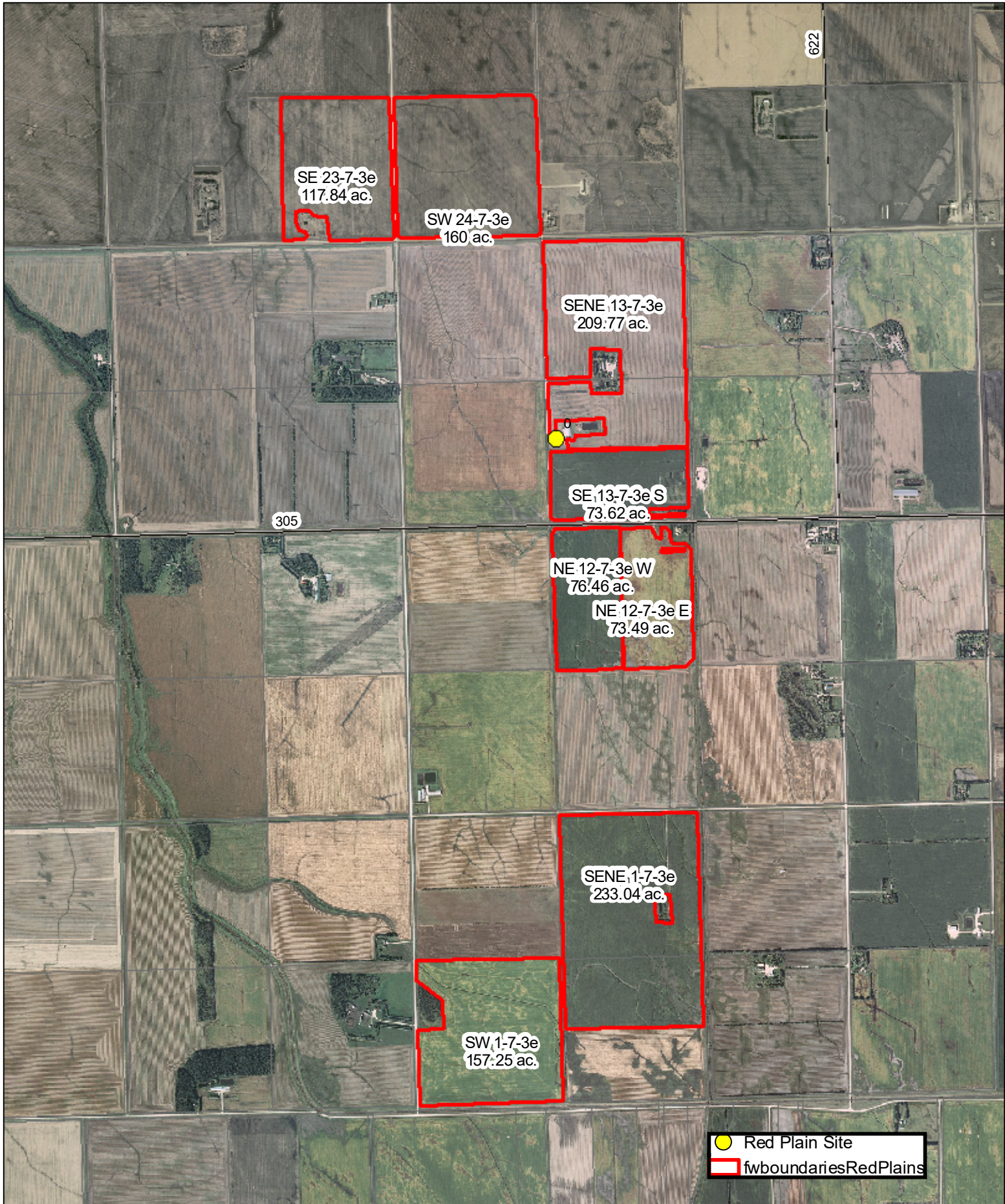


Field	A	B	C	D	E	F	G	H	I	J
	Legal Description	Rural Municipality	O/C/L/A	Total Acreage	Setbacks, including features	Net Acreage for Manure Application	Agriculture Capability Class and Subclass	Soil Phosphorus (ppm Olsen P) 0-6 inches	Development Plan Designation	Zoning
1	NESE 13-7-3e	Richot	O	210		210	2w2w, 2w3w, 2w	22	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
2	SW 24-7-3e	Richot	O	160		160	2w3w, 2w, 3w, 3w2w,	9	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
3	SW 1-7-3e	Richot	O	157		157	2w, 3w, 3w3w	24	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
4	NESE 1-7-3e	Richot	O	233		233	2w2w, 2w3w, 3w, 2w	18	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
5	SE 23-7-3e	Richot	A	118		153	2w, 3w,	21	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
6	SE 13-7-3e S	Richot	A	74		74	2w3w, 2w2w, 2w,	10	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
7	NE 12-7-3e W	Richot	A	76		76	2w2w, 2w3w	11	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
8	NE 12-7-3e E	Richot	A	73		73	2w2w, 2w	52	2/10, Green / Agricultural Policy Area	18-2002, Agricultural General Zone
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

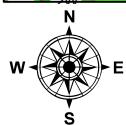
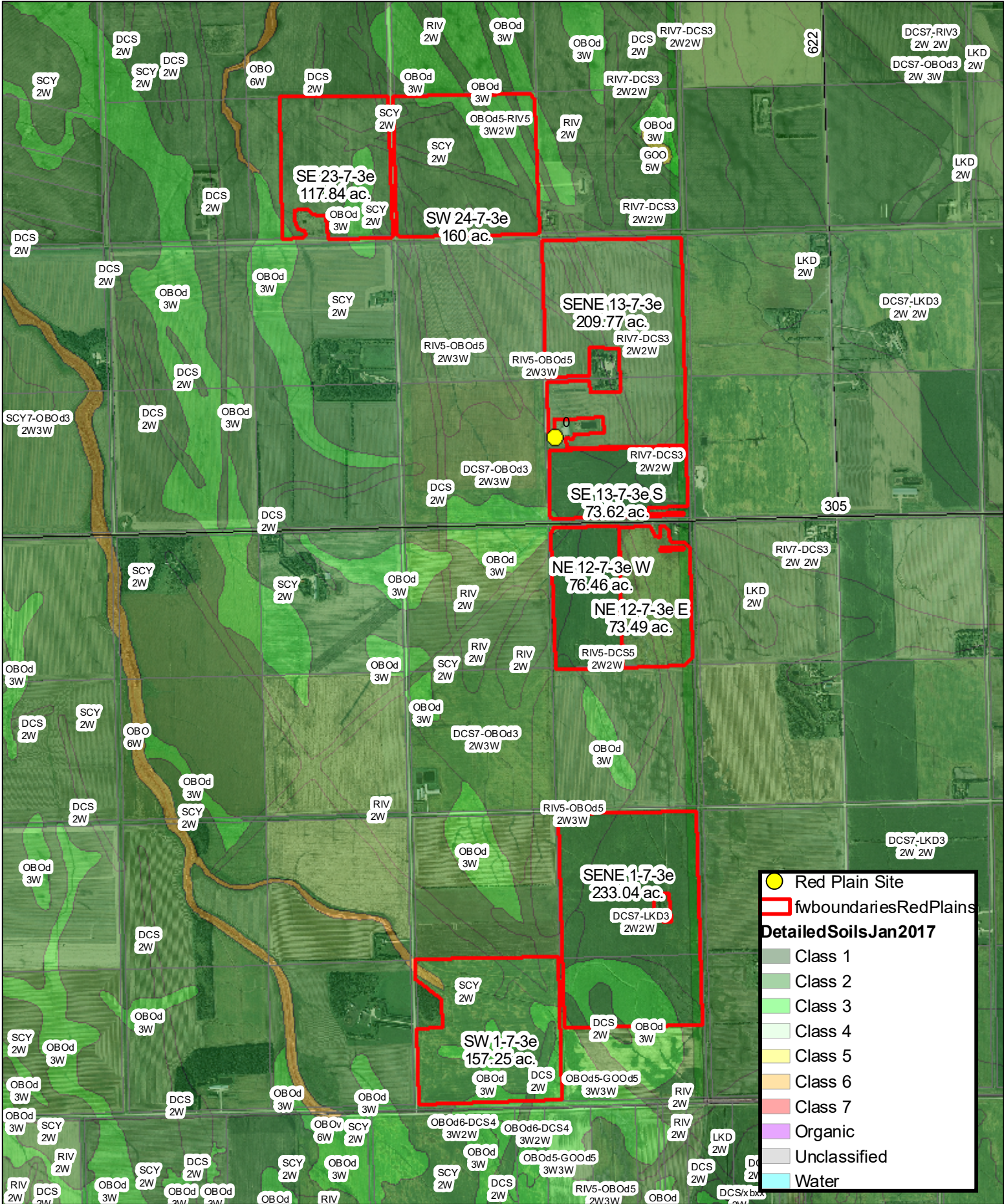
Total Net Acreage for Manure Application: 1101

- 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).

Red Plain Farms - Spread Field Boundaries



Red Plain Farms - Soils Map



0 0.25 0.5 1 Miles

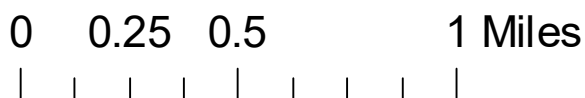
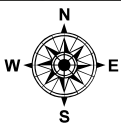
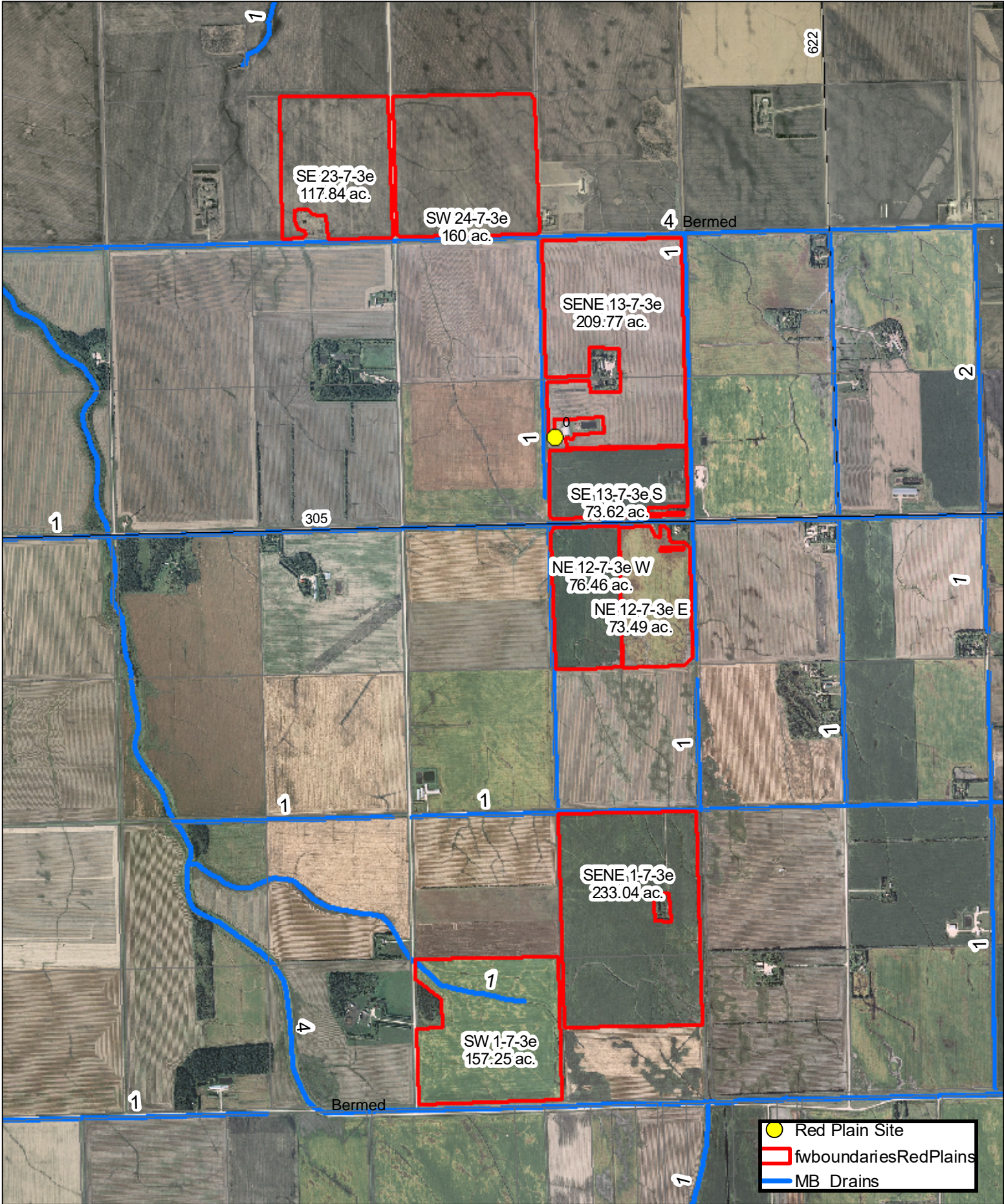


● Red Plain Site
 fwboundariesRedPlains

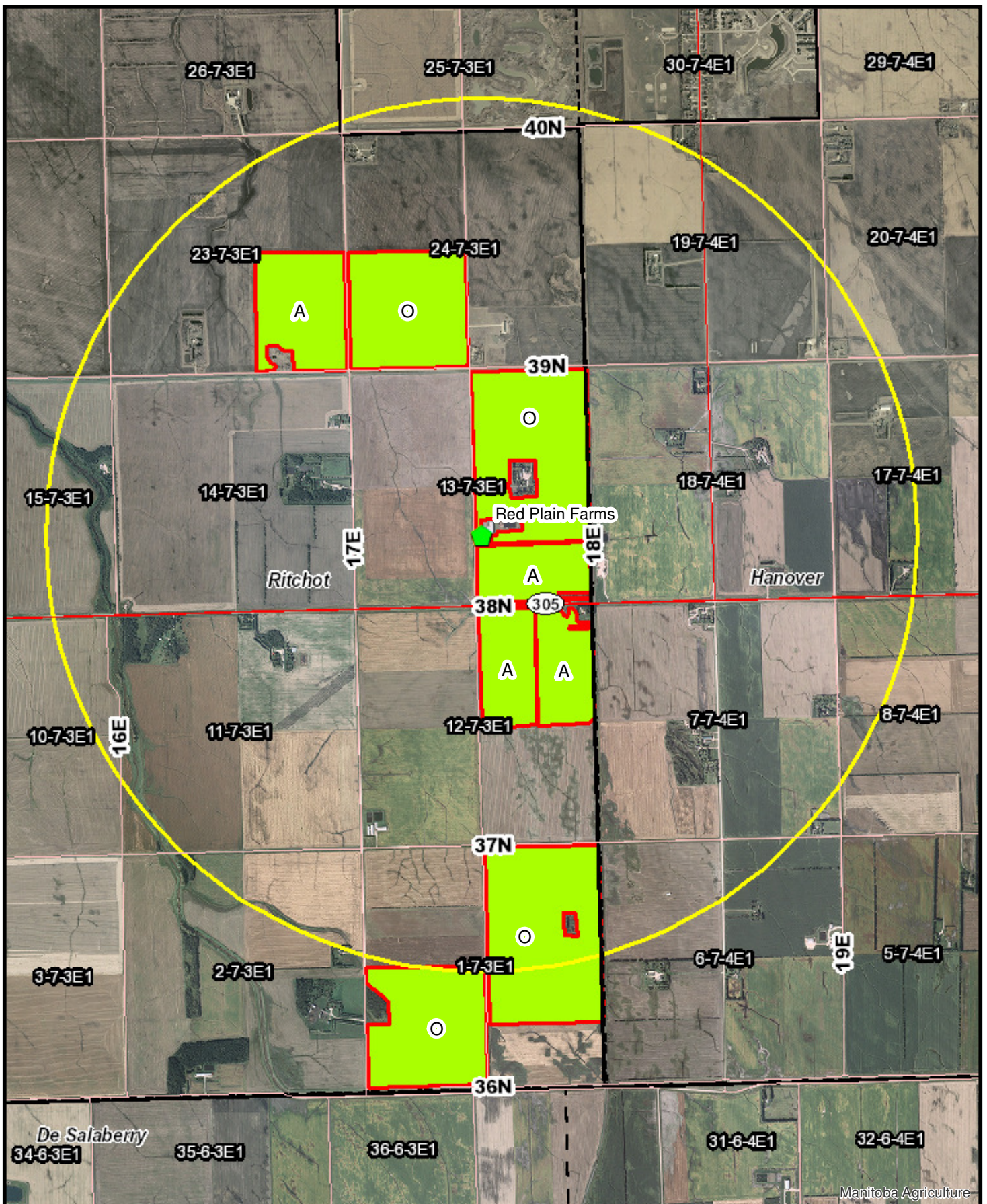
Detailed Soils Jan 2017

- Class 1
- Class 2
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7
- Organic
- Unclassified
- Water

Red Plain Farms - Provincial Drains Map



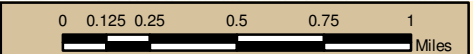
- Red Plain Site
- fwboundariesRedPlains
- MB Drains



Manitoba Agriculture

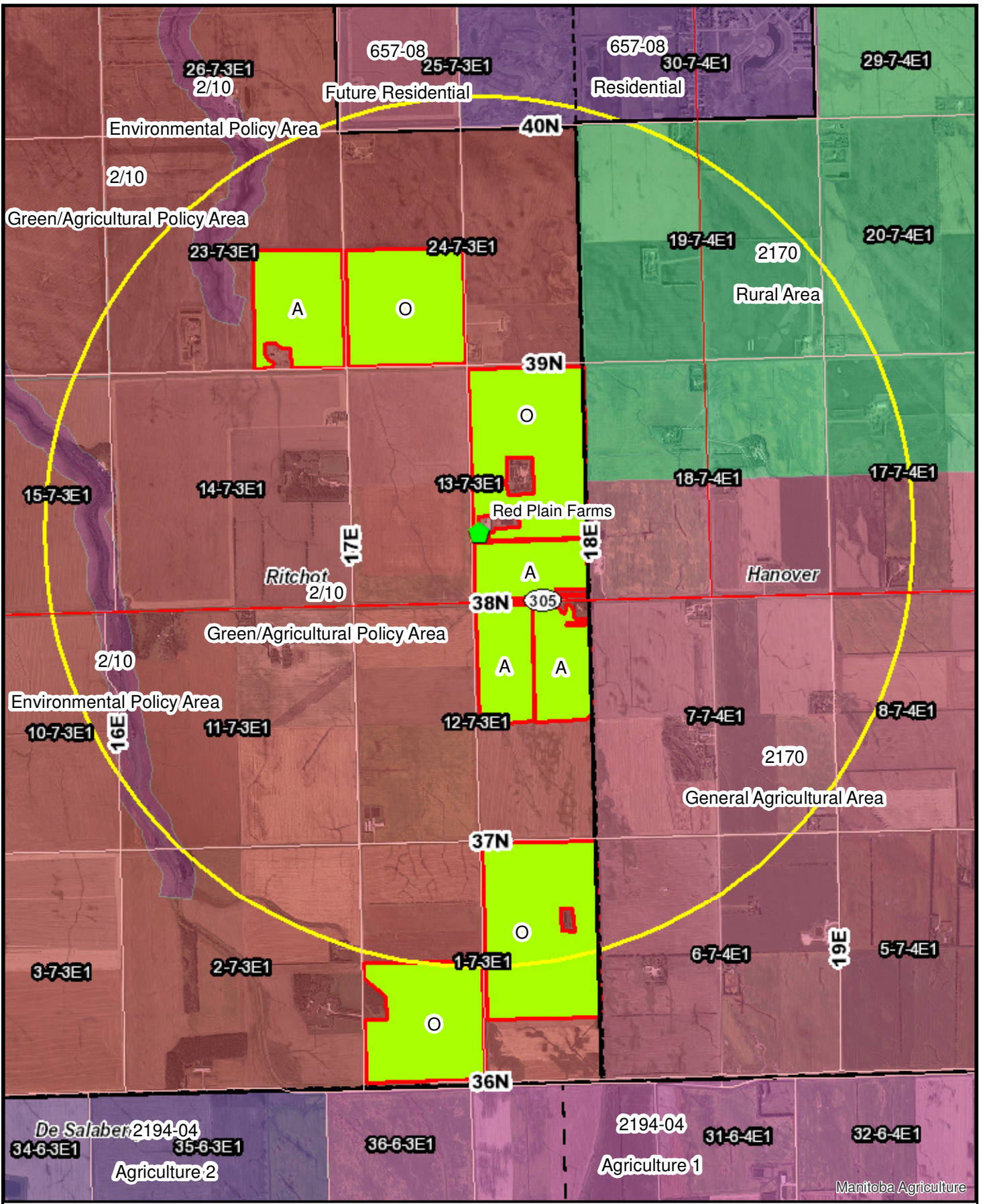


Red Plain Farms Land Use

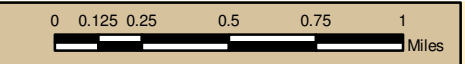


Coordinate System: Transverse Mercator
 Central Meridian: 99°0'0"W
 1st Std Parallel: 0°0'0"
 2nd Std Parallel: 0°0'0"
 Latitude of Origin: 0°0'0"





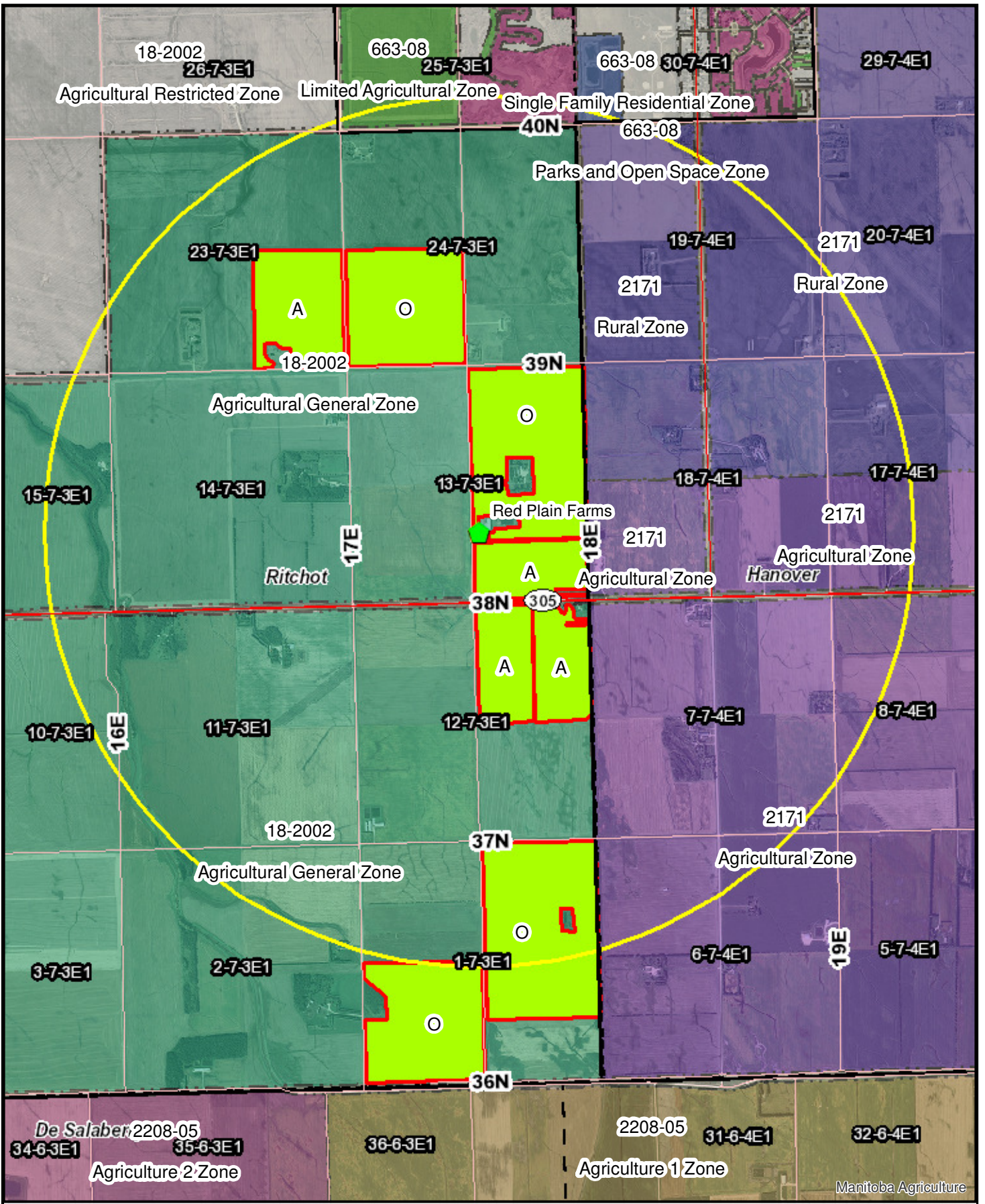
Red Plain Farms Land Use - Development Plan



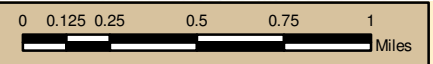
Coordinate System: Transverse Mercator
 Central Meridian: 99°0'0"W
 1st Std Parallel: 0°0'0"
 2nd Std Parallel: 0°0'0"
 Latitude of Origin: 0°0'0"



Manitoba Agriculture



Red Plain Farms Land Use - Zoning



Coordinate System: Transverse Mercator
 Central Meridian: 99°0'0"W
 1st Std Parallel: 0°0'0"
 2nd Std Parallel: 0°0'0"
 Latitude of Origin: 0°0'0"



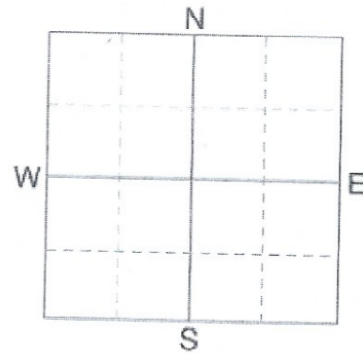
Manitoba Agriculture



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

SOIL TEST REPORT

FIELD ID **3,4,5**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **7-3E** RANGE
 SECTION **13** QTR **N+SE** ACRES **215**
 PREV. CROP **Corn-Grain**



SUBMITTED FOR:
PAUL LOEPPKY
3093 KRATH RD
STE AGATHA, MB **ROG 1Y2**

SUBMITTED BY: **PR2421**
PRAIRIE SKY AVIATION
2 MI SOUTH ON 59
BOX 309
NIVERVILLE, MB **ROA 1E0**

REF # **18804307** BOX # **0**
 LAB # **NW167448**

Date Sampled **10/25/2017**

Date Received **10/27/2017**

Date Reported **11/1/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6"	29 lb/ac				Soybeans		Soybeans		Soybeans				
	6-24"	30 lb/ac	*****			YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	59 lb/ac				40 BU		45 BU		50 BU				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
Phosphorus	Olsen	22 ppm	*****			Band		Band		Band				
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium		370 ppm	*****			N	***	N	***	N	***			
						P ₂ O ₅	10	P ₂ O ₅	11	P ₂ O ₅	12			
Chloride	0-6"	108 lb/ac	*****											
	6-24"	360 +lb/ac	*****											
Sulfur						K ₂ O	0	K ₂ O	0	K ₂ O	0			
						Cl		Cl		Cl				
Boron		2.0 ppm	*****			S	0	S	0	S	0			
						B	0	B	0	B	0			
Zinc		1.65 ppm	*****			Zn	0	Zn	0	Zn	0			
						Fe	0	Fe	0	Fe	0			
Iron		15.1 ppm	*****			Mn	0	Mn	0	Mn	0			
						Cu	0	Cu	0	Cu	0			
Manganese		1.3 ppm	*****			Mg	0	Mg	0	Mg	0			
						Lime		Lime		Lime				
Copper		2.24 ppm	*****											
Magnesium		2000 ppm	*****											
Calcium		5714 ppm	*****											
Sodium		170 ppm	*****											
Org.Matter		4.3 %	*****											
Carbonate(CCE)														
Sol. Salts	0-6"	0.79 mmho/cm	*****			Soil pH	8.2	Cation Exchange Capacity	46.9 meq	% Base Saturation (Typical Range)				
	6-24"	0.97 mmho/cm	*****			Buffer pH	8.5			% Ca	% Mg	% K	% Na	% H
										(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
										60.9	35.5	2.0	1.6	

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

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 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. 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: P205 = 40 K2O = 68 AGVISE Band guidelines will build P & K test levels to the medium range over many years. 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 = 44 K2O = 75 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

Report Number: C17255-10048
 Account Number: 06352

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, Ontario, N5V 3P5
 Telephone: (519) 457-2575 Fax: (519) 457-2664



C17255-10048



To: PATERSON GRAIN
 P.O. BOX 356
 25 HERITAGE TRAIL
 NIVERVILLE, MB R0A 1E0
 Attn: AARON BOLDUC
 204-388-6888

For: PAUL LEOPKY

Farm: FIELD 21
 Field: SW24 7 3E

Reported Date: Printed Date: Sep 14, 2017

SOIL TEST REPORT

Page: 1 / 1

Sample Number	Legal Land Descpt:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH	CEC meq/100g	Percent Base Saturations				
					Bicarb	Bray-P1						% K	% Mg	% Ca	% H	% Na
A		6	34807	4.3	9 M	17 M	207 M	1775 VH	6010 M	8.0	45.8	1.2	32.3	65.6	1.3	
B		12	34808	3.1	3 VL	3 VL	86 L	2275 VH	6540 M	8.5	52.4	0.4	36.2	62.4	1.5	
C		24	34809	2.4	4 VL	4 VL	104 L	2375 VH	4590 L	8.5	43.8	0.6	45.2	52.4	2.3	

Sample Number	Sulfur S		Nitrate Nitrogen NO3-N		Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Saturation %P	Aluminum Al ppm	Saturation %Al	K/Mg Ratio	ENR	Chloride Cl ppm	Sodium Na ppm
	ppm	lbs/ac	ppm	lbs/ac													
A	40 VL	72	4 VL	7	2.0 L	30 H	37 H	2.9 H	1.9 H		2 L	106	0.0 G	0.04	55		137 H
B	32 VL	58	1 VL	2	0.2 VL	11 L	32 H	2.2 H	1.5 H			44	0.0 G	0.01	43		182 H
C	42 VL	151	1 VL	4							1 VL	41	0.0 G	0.01	36		232 VH

W VL = VERY LOW, L = LOW, M = MEDIUM, H = HIGH, VH = VERY HIGH, G = GOOD, MA = MARGINAL, MT = MODERATE PHYTO-TOXIC, T = PHYTO-TOXIC, ST = SEVERE PHYTO-TOXIC

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Previous Crop	Intended Crop	Yield Goal	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B
<p>MMP NUMBER 2018-013</p> <p>Red Plain Farms</p>															

* Recs are based on building nutrients to a level to maintain soil health. Banding and/or precision placement techniques can be utilized to increase fertilizer efficiency.
 * If this report contains soil in excess of 7500 ppm Ca it may or may not effect the calculated Cation Exchange Capacity. Excessive seed placed fertilizer can cause injury.
The results of this report relate to the sample submitted and analyzed.

* Crop yield is influenced by a number of factors in addition to soil fertility.
No guarantee or warranty concerning crop performance is made by A & L.

Results Authorized By:  Ian McLachlin, Vice President

A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

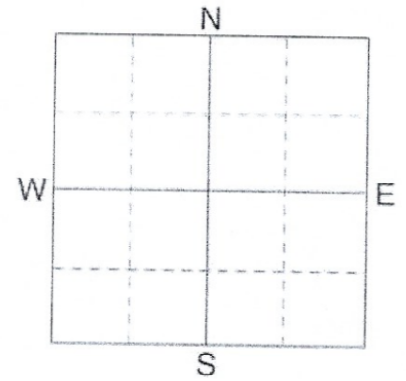
Field 2. SW 24-7-3e



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

SOIL TEST REPORT

FIELD ID **8169**
 SAMPLE ID
 FIELD NAME **Paul L**
 COUNTY
 TWP **SW 1-7-3e** RANGE
- 6
 SECTION QTR ACRES **164**
 PREV. CROP **Oats**



SUBMITTED FOR:
NSB 1

SUBMITTED BY: **EL1911**
AGRA-GOLD CONSULTING LTD
CLIFF LOEWEN
33020 ROAD 40 N
BLUMENORT, MB ROA 0C1

REF # **1989997** BOX # **0**
 LAB # **NW67121**

Date Sampled **09/11/2017**

Date Received **09/13/2017**

Date Reported **9/14/20**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6" 10 lb/ac					Corn-Grain								
	6-24" 6 lb/ac					YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24" 16 lb/ac	***				160 BU								
Phosphorus	Olsen 24 ppm					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	Potassium 447 ppm					Band								
Chloride	0-6" 58 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	6-24" 168 lb/ac					N 176		N		N				
Sulfur	0-6" 58 lb/ac					P ₂ O ₅ 15	Band (2x2) *	P ₂ O ₅		P ₂ O ₅				
	6-24" 168 lb/ac					K ₂ O 10	Band (2x2) *	K ₂ O		K ₂ O				
Boron						Cl		Cl		Cl				
Zinc	1.78 ppm					S 0		S		S				
Iron						B		B		B				
Manganese						Zn 2	Band (Trial)	Zn		Zn				
Copper						Fe		Fe		Fe				
Magnesium	1738 ppm					Mn		Mn		Mn				
Calcium	6062 ppm					Cu		Cu		Cu				
Sodium	85 ppm					Mg 0		Mg		Mg				
Org. Matter	5.8 %					Lime		Lime		Lime				
Carbonate(CCE)						Soil pH		Cation Exchange		% Base Saturation (Typical Range)				
Sol. Salts	0-6" 0.86 mmho/cm					Buffer pH	Capacity							
	6-24" 0.83 mmho/cm					0-6" 7.5	46.3 meq	% Ca	% Mg	% K	% Na	% I		
						6-24" 8.2		(65-75)	(15-20)	(1-7)	(0-5)	(0-5)		
								65.5	31.3	2.5	0.8			

General Comments: Clays/Clay Loams (CEC range = 30+) (Fine)

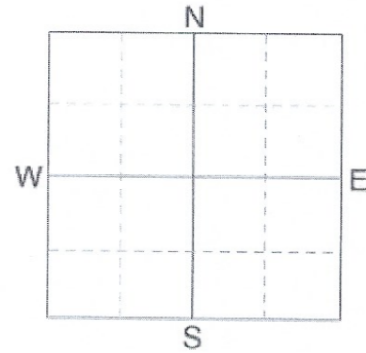
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 64 K2O = 43 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID **51**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **7-3E** RANGE
 SECTION **1** QTR **N+SE** ACRES **230**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
PAUL LOEPPKY
3093 KRATH RD
STE AGATHA, MB **ROG 1Y2**

SUBMITTED BY: **PR2421**
PRAIRIE SKY AVIATION
2 MI SOUTH ON 59
BOX 309
NIVERVILLE, MB **ROA 1E0**

REF # **18804306** BOX # **0**
 LAB # **NW167451**

Date Sampled **10/25/2017** Date Received **10/27/2017** Date Reported **11/1/2017**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		Very Low	Low	Med	High	Oats		Oats		Oats			
Nitrate	0-6" 12 lb/ac	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	6-24" 15 lb/ac					140 BU		130 BU		120 BU			
	0-24" 27 lb/ac					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Band		Band		Band			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen 18 ppm	*****	*****	*****	N	98	N	88	N	78			
Potassium	377 ppm	*****	*****	*****	P ₂ O ₅	15 Band (Starter)*	P ₂ O ₅	15 Band (Starter)*	P ₂ O ₅	15 Band (Starter)*			
Chloride					K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (Starter)*	K ₂ O	10 Band (Starter)*			
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	*****	*****	*****	Cl		Cl		Cl				
Boron	1.4 ppm	*****	*****	*****	S	0	S	0	S	0			
Zinc	1.19 ppm	*****	*****	*****	B	0	B	0	B	0			
Iron	18.5 ppm	*****	*****	*****	Zn	0	Zn	0	Zn	0			
Manganese	1.2 ppm	*****	*****	*****	Fe	0	Fe	0	Fe	0			
Copper	1.69 ppm	*****	*****	*****	Mn	0	Mn	0	Mn	0			
Magnesium	1818 ppm	*****	*****	*****	Cu	0	Cu	0	Cu	0			
Calcium	5562 ppm	*****	*****	*****	Mg	0	Mg	0	Mg	0			
Sodium	185 ppm	*****	*****	*****	Lime		Lime		Lime				
Org.Matter	3.8 %	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)					Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.9 mmho/cm 6-24" 1.11 mmho/cm	*****	*****	*****	0-6" 8.1 6-24" 8.3		44.7 meq		(65-75) 62.2	(15-20) 33.9	(1-7) 2.2	(0-5) 1.8	(0-5)

General Comments: Texture is not estimated on high pH soils.
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 = 35 K2O = 27 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * 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 = 33 K2O = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * 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 = 30 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **5211**
 SAMPLE ID
 FIELD NAME **John Loeppky**
 COUNTY
 TWP **SE 23-7-3e** RANGE
 SECTION QTR ACRES **157**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
NSB 3

SUBMITTED BY: **EL1911**
AGRA-GOLD CONSULTING LTD
CLIFF LOEWEN
33020 RD 40 N
BLUMENORT, MB ROA 0C1

REF # **2360437** BOX # **2581**
 LAB # **NW65219**

Date Sampled **09/10/2018**

Date Received **09/10/2018**

Date Reported **9/11/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		Very Low	Low	Med	High									
Nitrate	0-6"	7 lb/ac				Wheat-Spring								
	6-24"	6 lb/ac	***			YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24"	13 lb/ac				80 BU								
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Band								
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Phosphorus	Olsen	21 ppm	*****			N	188	N		N				
Potassium		487 ppm	*****			P ₂ O ₅	15	P ₂ O ₅		P ₂ O ₅				
Chloride						K ₂ O	10	K ₂ O		K ₂ O				
Sulfur	0-6"	32 lb/ac	*****			Cl		Cl		Cl				
	6-24"	360 +lb/ac	*****			S	0	S		S				
Boron						B		B		B				
Zinc		1.35 ppm	*****			Zn	0	Zn		Zn				
Iron						Fe		Fe		Fe				
Manganese						Mn		Mn		Mn				
Copper						Cu		Cu		Cu				
Magnesium		2588 ppm	*****			Mg	0	Mg		Mg				
Calcium		4684 ppm	*****			Lime		Lime		Lime				
Sodium		245 ppm	*****											
Org. Matter		4.4 %	*****											
Carbonate(CCE)														
	0-6"	0.36 mmho/cm	*****			Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"	0.77 mmho/cm	*****			0-6"	7.8	47.3 meq		% Ca	% Mg	% K	% Na	% H
Sol. Salts						6-24"	8.5			(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
										49.5	45.6	2.6	2.3	

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

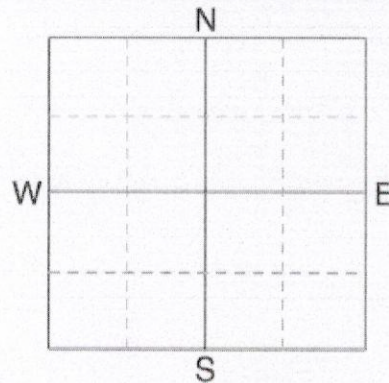
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 30 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



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

SOIL TEST REPORT

FIELD ID #6A
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP 7-3E RANGE
 SECTION 13 QTR SE ACRES 80
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
PAUL LOEPPKY

SUBMITTED BY: **PR2421**
PRAIRIE SKY AVIATION
2 MI SOUTH ON 59
BOX 309
NIVERVILLE, MB **ROA 1E0**

REF # **17357397** BOX # **4562**
 LAB # **NW84341**

Date Sampled **09/18/2018**

Date Received **09/20/2018**

Date Reported **9/24/2018**

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" 13 lb/ac	****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	6-24" 9 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	0-24" 22 lb/ac					N		N		N				
Phosphorus	Olsen 10 ppm	*****	*****	*****			P ₂ O ₅		P ₂ O ₅					
Potassium	293 ppm	*****	*****	*****			K ₂ O		K ₂ O					
Chloride							Cl		Cl					
Sulfur	0-6" 86 lb/ac	*****	*****	*****	*****			S		S				
	6-24" 360 +lb/ac							B		B				
Boron	1.8 ppm	*****	*****	*****			Zn		Zn					
Zinc	0.48 ppm	*****	*****	*****			Fe		Fe					
Iron	16.5 ppm	*****	*****	*****			Mn		Mn					
Manganese	2.3 ppm	*****	*****	*****			Cu		Cu					
Copper	1.48 ppm	*****	*****	*****			Mg		Mg					
Magnesium	1709 ppm	*****	*****	*****			Lime		Lime					
Calcium	5514 ppm	*****	*****	*****										
Sodium	99 ppm	*****	*****	*****										
Org. Matter	4.4 %	*****	*****	*****										
Carbonate(CCE)														
Sol. Salts	0-6" 0.78 mmho/cm	*****	*****	*****	*****	Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24" 1.13 mmho/cm								% Ca	% Mg	% K	% Na	% H	
						0-6" 8.2		43.0 meq	(65-75)	(15-20)	(1-7)	(0-5)	(0-5)	
						6-24" 8.4			64.1	33.1	1.7	1.0		

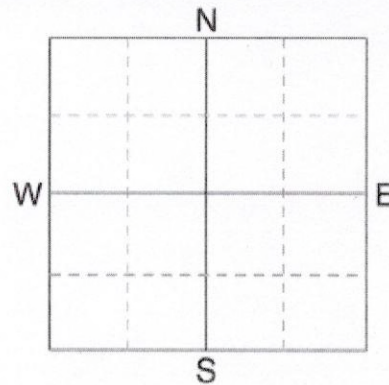
General Comments: Texture is not estimated on high pH soils.



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

SOIL TEST REPORT

FIELD ID #6B
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP 7-3E RANGE
 SECTION 12 QTR NE ACRES 80
 PREV. CROP Wheat-Spring



SUBMITTED FOR:
PAUL LOEPPKY
STE. AGATHE, MB ROG 1Y2

SUBMITTED BY: **PR2421**
PRAIRIE SKY AVIATION
2 MI SOUTH ON 59
BOX 309
NIVERVILLE, MB ROA 1E0

REF # **17356976** BOX # **4855**
 LAB # **NW87762**

Date Sampled **09/19/2018**

Date Received **09/21/2018**

Date Reported **9/25/2018**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL				
Nitrate	0-6"	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	6-24"	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	0-24"	*****				N		N		N				
Phosphorus	Olsen 11 ppm	*****				P ₂ O ₅		P ₂ O ₅		P ₂ O ₅				
Potassium	445 ppm	*****				K ₂ O		K ₂ O		K ₂ O				
Chloride						Cl		Cl		Cl				
Sulfur	0-6"	*****				S		S		S				
	6-24"	*****				B		B		B				
Boron	1.2 ppm	*****				Zn		Zn		Zn				
Zinc	1.03 ppm	*****				Fe		Fe		Fe				
Iron	30.1 ppm	*****				Mn		Mn		Mn				
Manganese	1.7 ppm	*****				Cu		Cu		Cu				
Copper	1.71 ppm	*****				Mg		Mg		Mg				
Magnesium	1699 ppm	*****				Lime		Lime		Lime				
Calcium	5211 ppm	*****												
Sodium	69 ppm	*****												
Org. Matter	6.2 %	*****												
Carbonate(CCE)														
Sol. Salts	0-6"	*****				Soil pH	Buffer pH	% Base Saturation (Typical Range)		% Ca	% Mg	% K	% Na	% H
	6-24"	*****				0-6" 7.7		Cation Exchange Capacity		(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
						6-24" 8.3		41.7 meq		62.6	34.0	2.7	0.7	

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



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

SOIL TEST REPORT

FIELD ID **7**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **NE 12-7-3E** RANGE
 SECTION QTR ACRES **75**
 PREV. CROP **Canola-bu**



SUBMITTED FOR:
J&M LEOPPKY

NIVERVILLE, MB ROA 1E0

SUBMITTED BY: **TE3082**
PATERSON GRAIN-NIVERVILLE
25 HERITAGE TRAIL
BOX 356
NIVERVILLE, MB ROA 1E0

REF # **14652985** BOX # **1233**
 LAB # **NW48393**

Date Sampled **08/24/2018**

Date Received **08/28/2018**

Date Reported **8/29/2018**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
Depth	Concentration		Wheat-Spring	Oats	Soybeans				
Nitrate	0-6"	14 lb/ac	Wheat-Spring	Oats	Soybeans				
	6-24"	42 lb/ac	YIELD GOAL	YIELD GOAL	YIELD GOAL				
Phosphorus	0-24"	56 lb/ac	80 BU	150 BU	50 BU				
			SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES				
Potassium			Band	Band	Band				
			LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION				
Chloride			N 160	N 94	N ***				
			P ₂ O ₅ 15 Band (Starter)*	P ₂ O ₅ 15 Band (Starter)*	P ₂ O ₅ 10 Band (Starter)*				
Sulfur	0-24"	496 lb/ac	K ₂ O 10 Band (Starter)*	K ₂ O 10 Band (Starter)*	K ₂ O 0				
			Cl 0	Cl 0	Cl 0				
Boron	0-6"	92 lb/ac	S 0	S 0	S 0				
	6-24"	360 +lb/ac	B 0	B 0	B 0				
Zinc			Zn 0	Zn 0	Zn 0				
			Fe 0	Fe 0	Fe 0				
Iron			Mn 0	Mn 0	Mn 0				
			Cu 0	Cu 0	Cu 0				
Manganese			Mg 0	Mg 0	Mg 0				
			Lime	Lime	Lime				
Copper			Soil pH		% Base Saturation (Typical Range)				
			Buffer pH	Cation Exchange Capacity	% Ca	% Mg	% K	% Na	% H
Magnesium			0-6" 8.3	43.0 meq	(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
			6-24" 8.6		57.5	38.2	2.0	2.3	
Calcium			General Comments: Texture is not estimated on high pH soils.						
			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 = 50 K20 = 30 AGVISE Band guidelines will build P & K test levels to the medium range over many years.						
Sodium			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 = 38 K20 = 29 AGVISE Band guidelines will build P & K test levels to the medium range over many years.						
			Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is very high based on the salt and carbonate levels. Crop Removal: P205 = 44 K20 = 75 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.						
Org.Matter									
Carbonate(CCE)									
Sol. Salts	0-6"	0.81 mmho/cm							
	6-24"	1.2 mmho/cm							

General Comments: Texture is not estimated on high pH soils.
 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 = 50 K20 = 30 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 38 K20 = 29 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
 Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is very high based on the salt and carbonate levels. Crop Removal: P205 = 44 K20 = 75 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.




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)

ARGENTINE CANOLA 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



2008 to 2017

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)	Potassium (lbs)	Sulphur (lbs)
2017	RISK AREA 12	ARGENTINE CANOLA	C	133	26,562.0	54.4 Bushels	124.5	38.3	6.0	14.7
2017	RISK AREA 12	ARGENTINE CANOLA	D	115	22,836.0	54.4 Bushels	124.7	39.7	5.2	15.0
2014	RISK AREA 12	ARGENTINE CANOLA	C	153	28,577.0	51.1 Bushels	119.1	36.9	5.9	13.3
2014	RISK AREA 12	ARGENTINE CANOLA	D	138	24,328.0	49.8 Bushels	119.6	37.6	7.3	13.4
2013	RISK AREA 12	ARGENTINE CANOLA	C	172	31,472.0	49.3 Bushels	118.0	33.6	4.2	12.3
2008	RISK AREA 12	ARGENTINE CANOLA	C	162	30,481.0	48.2 Bushels	106.2	33.1	5.2	10.8
2013	RISK AREA 12	ARGENTINE CANOLA	D	164	29,602.5	47.5 Bushels	113.6	34.8	5.6	13.5
2008	RISK AREA 12	ARGENTINE CANOLA	D	152	25,619.0	46.9 Bushels	101.1	31.2	5.1	11.1
2015	RISK AREA 12	ARGENTINE CANOLA	C	159	31,804.0	45.1 Bushels	125.6	38.2	6.1	13.5

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)	Potassium (lbs)	Sulphur (lbs)
2009	RISK AREA 12	ARGENTINE CANOLA	D	178	34,981.0	43.8 Bushels	100.8	30.9	3.4	11.0
2015	RISK AREA 12	ARGENTINE CANOLA	D	138	25,990.0	43.8 Bushels	118.7	39.9	8.0	14.8
2010	RISK AREA 12	ARGENTINE CANOLA	D	174	32,581.0	43.4 Bushels	109.1	32.5	4.7	12.0
2009	RISK AREA 12	ARGENTINE CANOLA	C	186	37,929.0	41.7 Bushels	105.8	29.6	3.4	10.1
2010	RISK AREA 12	ARGENTINE CANOLA	C	192	40,011.6	38.9 Bushels	111.1	31.2	3.5	11.8
2016	RISK AREA 12	ARGENTINE CANOLA	D	135	26,375.0	38.7 Bushels	120.2	38.8	5.3	14.3
2016	RISK AREA 12	ARGENTINE CANOLA	C	128	24,522.0	36.4 Bushels	122.6	36.6	6.3	13.7
2011	RISK AREA 12	ARGENTINE CANOLA	D	204	44,320.2	36.3 Bushels	110.2	32.4	6.0	12.3
2011	RISK AREA 12	ARGENTINE CANOLA	C	197	45,700.0	33.8 Bushels	113.9	31.7	3.9	10.4
2012	RISK AREA 12	ARGENTINE CANOLA	C	157	31,355.0	33.1 Bushels	113.8	32.3	4.8	11.7
2012	RISK AREA 12	ARGENTINE CANOLA	D	159	29,581.0	32.6 Bushels	115.7	34.3	5.2	12.3

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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 

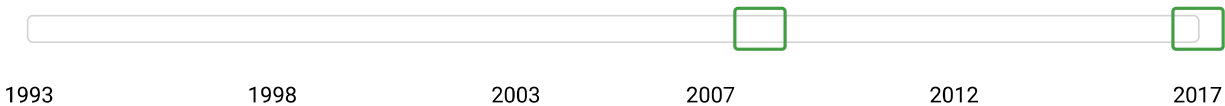
Select Crop(s)

GRAIN CORN 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



2008 to 2017

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)	Potassium (lbs)	Sulphur (lbs)
2016	RISK AREA 12	GRAIN CORN	C	111	26,380.8	160.5 Bushels	133.3	41.6	11.9	8.1
2016	RISK AREA 12	GRAIN CORN	D	122	22,299.0	154.4 Bushels	132.4	46.2	19.8	7.7
2013	RISK AREA 12	GRAIN CORN	D	142	26,165.0	153.7 Bushels	121.7	38.7	14.5	5.4
2017	RISK AREA 12	GRAIN CORN	D	124	25,054.0	152.0 Bushels	130.2	43.3	17.5	7.7
2017	RISK AREA 12	GRAIN CORN	C	108	26,245.0	151.9 Bushels	138.2	41.4	14.0	7.4
2015	RISK AREA 12	GRAIN CORN	C	79	16,752.0	149.9 Bushels	132.4	38.6	13.3	8.5
2015	RISK AREA 12	GRAIN CORN	D	99	16,989.0	149.8 Bushels	124.0	42.1	21.7	7.1
2013	RISK AREA 12	GRAIN CORN	C	122	27,048.0	149.0 Bushels	125.0	35.9	11.4	4.9
2012	RISK AREA 12	GRAIN CORN	C	109	25,016.0	136.4 Bushels	120.5	34.5	8.5	3.6

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)	Potassium (lbs)	Sulphur (lbs)
2014	RISK AREA 12	GRAIN CORN	C	104	21,285.0	135.0 Bushels	126.5	42.0	13.8	5.9
2010	RISK AREA 12	GRAIN CORN	D	91	15,765.0	134.9 Bushels	105.9	34.4	11.8	4.5
2012	RISK AREA 12	GRAIN CORN	D	134	25,498.0	134.2 Bushels	117.2	37.9	14.3	4.6
2008	RISK AREA 12	GRAIN CORN	C	109	25,430.0	132.8 Bushels	102.2	33.4	12.0	3.8
2010	RISK AREA 12	GRAIN CORN	C	96	20,743.0	132.1 Bushels	110.9	32.0	7.2	3.4
2008	RISK AREA 12	GRAIN CORN	D	123	23,188.0	130.7 Bushels	98.5	34.8	14.8	4.0
2014	RISK AREA 12	GRAIN CORN	D	113	21,584.0	129.0 Bushels	123.4	40.8	18.6	7.3
2011	RISK AREA 12	GRAIN CORN	D	117	21,329.0	110.1 Bushels	112.5	33.5	13.3	3.3
2011	RISK AREA 12	GRAIN CORN	C	94	19,529.1	108.1 Bushels	112.3	31.9	8.6	3.8
2009	RISK AREA 12	GRAIN CORN	D	107	17,146.0	30.3 Bushels	103.6	32.5	13.6	3.5
2009	RISK AREA 12	GRAIN CORN	C	94	20,348.0	24.9 Bushels	101.6	31.0	9.4	3.7

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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



2008 to 2017

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.

Showing 1 to 20 of 20 entries

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Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)	Potassium (lbs)	Sulphur (lbs)
2016	RISK AREA 12	SOYBEANS	C	105	20,433.0	46.3 Bushels	7.5	34.6	4.9	3.3
2013	RISK AREA 12	SOYBEANS	C	72	14,210.0	43.5 Bushels	6.0	32.4	1.5	0.9
2013	RISK AREA 12	SOYBEANS	D	63	10,287.0	43.5 Bushels	5.5	32.7	4.8	1.7
2016	RISK AREA 12	SOYBEANS	D	103	18,776.0	42.9 Bushels	5.1	38.3	4.3	1.8
2010	RISK AREA 12	SOYBEANS	C	38	6,406.0	40.3 Bushels	9.1	25.3	1.8	1.2
2015	RISK AREA 12	SOYBEANS	D	105	18,090.0	39.4 Bushels	2.7	37.8	10.8	1.2
2014	RISK AREA 12	SOYBEANS	C	108	22,812.0	39.0 Bushels	4.0	34.3	4.9	1.3
2010	RISK AREA 12	SOYBEANS	D	43	7,240.0	38.9 Bushels	6.9	24.7	1.8	0.9
2014	RISK AREA 12	SOYBEANS	D	93	16,441.0	38.9 Bushels	5.2	35.7	6.7	3.0

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)	Potassium (lbs)	Sulphur (lbs)
2015	RISK AREA 12	SOYBEANS	C	106	19,924.0	38.9 Bushels	4.3	34.8	5.6	1.6
2012	RISK AREA 12	SOYBEANS	C	47	7,442.0	38.6 Bushels	10.2	26.8	2.9	0.5
2017	RISK AREA 12	SOYBEANS	C	105	24,359.0	38.2 Bushels	7.5	36.5	5.9	2.2
2009	RISK AREA 12	SOYBEANS	C	23	3,136.0	38.1 Bushels	11.6	24.0	2.1	1.5
2012	RISK AREA 12	SOYBEANS	D	63	9,071.0	36.8 Bushels	3.9	29.1	3.4	1.4
2017	RISK AREA 12	SOYBEANS	D	100	19,137.0	36.8 Bushels	4.0	38.1	8.4	1.6
2009	RISK AREA 12	SOYBEANS	D	26	3,643.0	35.0 Bushels	11.9	22.7	2.4	1.8
2008	RISK AREA 12	SOYBEANS	C	35	4,705.0	33.9 Bushels	10.5	25.1	2.9	3.4
2011	RISK AREA 12	SOYBEANS	D	45	5,033.0	33.6 Bushels	6.3	27.7	4.3	2.6
2011	RISK AREA 12	SOYBEANS	C	33	5,033.0	33.2 Bushels	11.9	23.3	0.8	1.1
2008	RISK AREA 12	SOYBEANS	D	35	5,186.0	32.8 Bushels	9.1	23.5	6.3	0.3

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RISK AREA 12 

Select Crop(s)

RED SPRING WHEAT 

Select Soil Type(s)

SOIL TYPE C, SOIL TYPE D 

Select Year Range



2008 to 2017

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)	Potassium (lbs)	Sulphur (lbs)
2017	RISK AREA 12	RED SPRING WHEAT	D	92	16,821.0	78.3 Bushels	112.5	41.1	8.6	4.4
2017	RISK AREA 12	RED SPRING WHEAT	C	97	17,468.0	78.0 Bushels	116.3	38.8	8.8	4.8
2014	RISK AREA 12	RED SPRING WHEAT	C	114	21,138.0	68.5 Bushels	110.3	38.1	6.6	3.9
2014	RISK AREA 12	RED SPRING WHEAT	D	120	19,057.0	67.7 Bushels	105.3	38.1	6.6	4.5
2013	RISK AREA 12	RED SPRING WHEAT	D	135	26,265.0	65.6 Bushels	102.2	38.3	10.6	2.8
2013	RISK AREA 12	RED SPRING WHEAT	C	131	22,333.0	65.1 Bushels	102.6	32.7	7.1	3.0
2008	RISK AREA 12	RED SPRING WHEAT	D	156	25,715.0	64.3 Bushels	85.0	32.2	6.7	2.4

Year	Risk Area / R.M.	Crop	Soil	Farms	Acres	Yield/acre (Imperial)	Nitrogen (lbs)	Phosphorus (lbs)	Potassium (lbs)	Sulphur (lbs)
2008	RISK AREA 12	RED SPRING WHEAT	C	165	28,240.0	63.6 Bushels	87.8	30.5	7.0	3.3
2012	RISK AREA 12	RED SPRING WHEAT	C	130	22,154.8	63.3 Bushels	105.1	33.3	6.7	3.6
2015	RISK AREA 12	RED SPRING WHEAT	C	146	24,434.0	62.5 Bushels	110.7	36.0	7.5	3.9
2015	RISK AREA 12	RED SPRING WHEAT	D	138	24,279.0	61.8 Bushels	112.0	38.0	9.7	3.3
2012	RISK AREA 12	RED SPRING WHEAT	D	131	23,117.0	61.4 Bushels	100.4	32.4	7.1	2.8
2009	RISK AREA 12	RED SPRING WHEAT	C	149	27,267.0	60.5 Bushels	93.7	30.2	4.7	2.0
2009	RISK AREA 12	RED SPRING WHEAT	D	159	25,824.5	60.3 Bushels	85.9	30.3	5.3	2.3
2016	RISK AREA 12	RED SPRING WHEAT	C	114	20,548.0	55.6 Bushels	114.0	37.5	7.3	4.7
2010	RISK AREA 12	RED SPRING WHEAT	D	162	29,979.2	54.3 Bushels	94.8	33.4	6.1	3.0
2016	RISK AREA 12	RED SPRING WHEAT	D	124	18,725.0	54.0 Bushels	109.6	38.9	6.1	3.6
2010	RISK AREA 12	RED SPRING WHEAT	C	149	28,587.0	52.5 Bushels	99.7	31.4	5.6	3.6
2011	RISK AREA 12	RED SPRING WHEAT	D	152	24,386.0	46.5 Bushels	92.1	30.3	6.3	2.3
2011	RISK AREA 12	RED SPRING WHEAT	C	147	29,885.1	45.1 Bushels	101.9	30.7	6.3	2.8

Show entries

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Manure Application Agreement

THIS AGREEMENT is made this 14th day of September, 2018, between
John/Marc Coeppke (landowner) and
Red Plain Farms Inc. (operator).


1. Landowner is owner of real property legally described as:

East 1/2 of NE 12-7-3E

2. Operator operates a hog confinement facility located on certain real property legally described as:

N 1/2 SE 13-7-3E
3127 Krahn Road

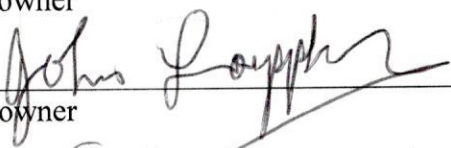
3. Operator desires access to the Landowner's Property for the purpose of applying manure generated by the facility.



Landowner



Operator



Landowner

Operator

Sept 14, 2018

Date

Sept 14/2018

Date

Manure Application Agreement

THIS AGREEMENT is made this 14th day of September, 2018, between
John/Marc Coeffky (landowner) and
Red Plain Farms Inc. (operator).

1. Landowner is owner of real property legally described as:

SE 23-7-3E

2. Operator operates a hog confinement facility located on certain real property legally described as:

N 1/2 SE 13-7-3E
3127 Krahn Road

3. Operator desires access to the Landowner's Property for the purpose of applying manure generated by the facility.

John Coeffky
Landowner

[Signature]
Operator

[Signature]
Landowner

[Signature]
Operator

Sept. 14, 2018
Date

Sept 14/2018
Date

Manure Application Agreement

THIS AGREEMENT is made this 14 day of Sept, 2018, between
Rolling Prairie Farms (landowner) and
Red Plain Farms Inc. (operator).

1. Landowner is owner of real property legally described as:

S 1/2 of SE 13-7-3E

2. Operator operates a hog confinement facility located on certain real property legally described as:

N 1/2 SE 13-7-3E
3127 Krahn Road

3. Operator desires access to the Landowner's Property for the purpose of applying manure generated by the facility.

Ruth Leppky
Landowner

Ruth Leppky
Operator

Landowner

Operator

Sept 14/2018
Date

Sept 14/2018
Date

Manure Application Agreement

THIS AGREEMENT is made this 14 day of Sept, 2018, between
Ruth Marie Loepky (landowner) and
Red Plain Farms Inc. (operator).

1. Landowner is owner of real property legally described as:

West 1/2 of NE 12-7-3E

2. Operator operates a hog confinement facility located on certain real property legally described as:

N 1/2 SE 13-7-3E
3127 Krahn Road

3. Operator desires access to the Landowner's Property for the purpose of applying manure generated by the facility.

Ruth Loepky
Landowner

Ruth Loepky
Operator

Landowner

Operator

Date

Sept 14/2018

Date

Sept 14/2018