

Clean Environment Condition Hearing

I own a 3rd generation mixed farm and operate it with my son. Our farm has always had livestock on it. In recent years the number of livestock has increased. We grow annual crops on 1100 acres, we also raise feeder pigs. We market around 5500 a year. We buy the pigs at 50 pounds and market them at 275 pounds.

We cover our earthen lagoon every summer with straw to minimize odour. Our lagoon is environmentally approved. Our manure is injected every fall. Our soil and our manure are tested for nutrients.

I have soil tests to show the phosphorus levels. I picked the field that is next to the barn. I have tests from 1995, 2004, 2006. We soil test every year but we don't apply manure every year to the same field. We increased our hog operation in 1997 and even with that there is no noticeable difference in phosphorus levels. This is field number 4 on the 1995 soil test, The field was number 7 and 8. The numbers were changed because we made larger fields to accommodate larger equipment.

I also have an agreement with a neighbour who applies manure to my land; again I have included the soil test.

This is field number 10; again the field is tested every year as well as the manure. I have included the years 1995, 2004, and 2006. That was the first year manure was applied to this land. Since 1996 this field has gotten manure every year. That is 11 consecutive years, again the nutrients levels are up for 06 and down for 04, but still remain in the low end of the scale. I have also included field number 11 that gets no manure to show the nutrients levels which is compatible to the manure fields.

On fields that don't get manure we apply fertilizer as per soil test recommendation to maximize our yields.

EXHIBIT NUMBER: FRI-012
File Name: Hog Renew
Date: April 11, 2007
Received by: [Signature]
(Commission Secretary)

Stan Toews

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

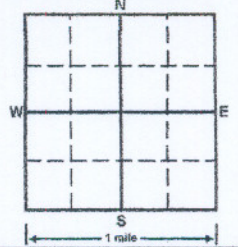
SUBMITTED FOR:
 OSTERWICK FARMS

SOIL TEST REPORT

FIELD 4 SAMPLE
 CNTY TWP SECTION
 QTR ACRES 65.0
 PREV. CROP Wheat-Spring

SUBMITTED BY: TE3082
 TERRAFLEX AG-NIVERV.
 25 158 AVE SOUTH
 BOX 356
 NIVERVILLE, MB
 ROA 1E0

Field Location



REF# 10170176
 LAB# 43733
 BOX# 0

Date Sampled: 8/18/06 Date Received: 8/24/06 Date Reported: 8/31/06

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE	
		Very Low	Low	Med	High						
Nitrate	0-6"	28 lb/ac				Oats		Wheat-Spring		Canola-bu	
	6-20"	30 lb/ac	****	****		YIELD GOAL		YIELD GOAL		YIELD GOAL	
	0-20"	58 lb/ac				100 BU		50 BU		50 BU	
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
						Broadcast/Maint.		Broadcast/Maint.		Broadcast/Maint.	
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
	Olsen	24 ppm	****	****	****	N	42	N	77	N	117
	Phosphorus					P ₂ O ₅	25 Broadcast	P ₂ O ₅	31 Broadcast	P ₂ O ₅	45 Broadcast
	Potassium	277 ppm	****	****	****	K ₂ O	10 Band(Starter)*	K ₂ O	10 Band(Starter)*	K ₂ O	0
Chloride	0-6"	57 lb/ac	****	****	****	Cl	0	Cl	0	Cl	0
	6-20"	193 lb/ac				S	0	S	0	S	10 Broadcast
Sulfur	0-6"	92 lb/ac	****	****	****	B	0	B	0	B	0
	6-20"	280 +lb/ac				Zn	0	Zn	0	Zn	0
	Boron	2.5 ppm	****	****	****	Fe	0	Fe	0	Fe	0
	Zinc	1.07 ppm	****	****	****	Mn	0	Mn	0	Mn	0
	Iron	19.5 ppm	****	****	****	Cu	0	Cu	0	Cu	0
	Manganese	2.0 ppm	****	****	****	Mg	0	Mg	0	Mg	0
	Copper	1.99 ppm	****	****	****	Lime		Lime		Lime	
	Magnesium	2240 ppm	****	****	****	Soil pH 8.4 Buffer pH Cation Exchange Capacity 43.9 meq % Base Saturation (Typical Range) % Ca (65-75) 54.6 % Mg (15-20) 42.5 % K (1-7) 1.6 % Na (0-5) 1.3 % H (0-5)					
	Calcium	4802 ppm	****	****	****						
	Sodium	127 ppm	****	****	****						
	Org Matter	3.4 %	****	****	****						
	Carbonate(CCE)	10.6 %	****	****	****						
Sol Salts	0-6"	0.75 mmho/cm	****	****	****						
	6-20"	0.87 mmho/cm	****	****	****						

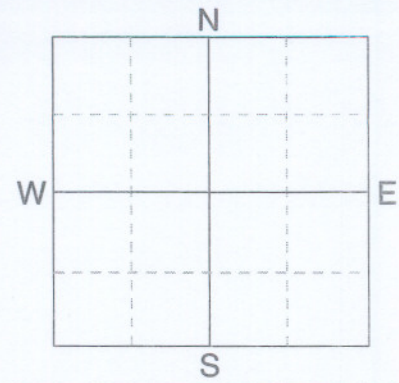
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Crop Removal: P2O5 = 25 K2O = 19 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Crop Removal: P2O5 = 31 K2O = 19 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 3: Crop Removal: P2O5 = 45 K2O = 23 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.



P.O. BOX 510, NORTHWOOD, ND 58267
(701) 587-6010

SOIL TEST REPORT

FIELD 4 SAMPLE
 COUNTY TWP SECTION
 QTR ACRES 80.0
 PREV CROP OATS



SUBMITTED FOR:

OSTERWICH FARMS

SUBMITTED BY:

TERRAFLEX AG-NIVERV.
 25 158 AVE SOUTH
 BOX 356
 NIVERVILLE NB

TE3082

ROA 1EQ CANADA

REF # 8699218
 LAB # 57599

BOX # 637

DATE SAMPLED 10/7/4

DATE RECEIVED 10/12/4

DATE REPORTED 10/13/04

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE			
		V LOW	LOW	MED	HIGH	CANOLA		WHEAT		YIELD GOAL			
Nitrate N	0-6" 15 lb/ac 6-24" 30 lb/ac 0-24" 45 lb/ac	*****				YIELD GOAL 50 BU	YIELD GOAL 50 BU						
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						P & K MAINTENANCE		P & K MAINTENANCE					
						LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION	LB/ACRE APPLICATION		
						N 130	N 90	N					
Phosphorus	23 ppm	*****	*****	*****	*****	P ₂ O ₅ 45 Broadcast	P ₂ O ₅ 31 Broadcast	P ₂ O ₅					
Potassium	209 ppm	*****	*****	*****	*****	K ₂ O 22 Broadcast	K ₂ O 18 Broadcast	K ₂ O					
Chloride	0-24" 104 lb/ac	*****	*****	*****	*****	Cl 0	Cl 0	Cl					
Sulfur	0-6" 70 lb/ac 6-24" 360+ lb/ac	*****	*****	*****	*****	S 10 Broadcast	S 0	S					
Boron	2.0 ppm	*****	*****	*****	*****	B 0	B 0	B					
Zinc	1.02 ppm	*****	*****	*****	*****	Zn 0	Zn 0	Zn					
Iron	14.1 ppm	*****	*****	*****	*****	Fe 0	Fe 0	Fe					
Manganese	1.6 ppm	*****	*****	*****	*****	Mn 0	Mn 0	Mn					
Copper	1.29 ppm	*****	*****	*****	*****	Cu 0	Cu 0	Cu					
Magnesium	1638 ppm	*****	*****	*****	*****	Mg 0	Mg 0	Mg					
Calcium	4687 ppm	*****	*****	*****	*****	Lime 0.0	Lime 0.0	Lime					
Sodium	72 ppm	*****	*****	*****	*****								
Organic Matter	3.8 %	*****	*****	*****	*****								
Carbonate (CCE)	9.5 %	*****	*****	*****	*****								
Soluble salts	0-6" 0.66 mmho/cm 6-24" 0.93 mmho/cm	*****	*****	*****	*****								
						Soil pH 8.3	Buffer pH	Cation Exchange Capacity 37.9 meq	% Base Saturation (Typical Range)				
									% Ca (65-75)	% Mg (15-20)	% K (1-7)	% Na (0-5)	% H (0-5)
									61.8	36.0	1.4	0.8	

Crop Removal: Crop 1: P205= 45 K2O= 23 Crop 2: P205= 31 K2O= 19

AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

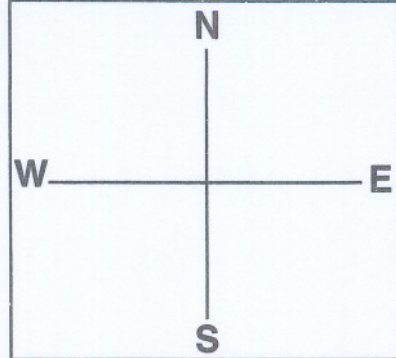
AGVISE[®]

LABORATORIES

P.O. BOX 510, NORTHWOOD, ND 58267
(701) 587-6010

SOIL TEST REPORT

FIELD 7 & 8 SAMPLE
COUNTY SECTION
TWP ACRES
QTR
PREV CROP WHEAT



SUBMITTED FOR:

STAN TOWES

SUBMITTED BY:

TE3082

TERRAFLEX AG-NIVERV.
BOX 356

NIVERVILLE MB

ROA 1E0

REF # 2403797

LAB # 59504

BOX # 1927

DATE SAMPLED

DATE RECEIVED

10/ 7/95

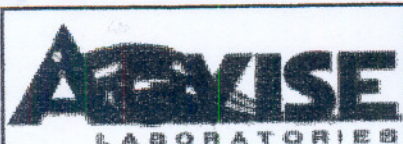
DATE REPORTED

10/ 9/95

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE				
		V LOW	LOW	MED	HIGH	WHEAT		MALTING BARLEY		MALTING BARLEY				
Nitrate N	0- 6"	11 lb/ac				YIELD GOAL 60 BU		YIELD GOAL 90 BU		YIELD GOAL 100 BU				
	6-24"	9 lb/ac				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	0-24"	20 lb/ac	****			P & K MAINTENANCE		P & K MAINTENANCE		P & K MAINTENANCE				
						LB /ACRE	APPLICATION	LB /ACRE	APPLICATION	LB /ACRE	APPLICATION			
Phosphorus	30 ppm	*****	*****	*****	*****	N	142	N	120	N	135			
Potassium	439 ppm	*****	*****	*****	*****	P ₂ O ₅	37 Broadcast	P ₂ O ₅	42 Broadcast	P ₂ O ₅	47 Broadcast			
Chloride						K ₂ O	10 Starter †	K ₂ O	10 Starter †	K ₂ O	10 Starter †			
Sulfur	0- 6" 18 lb/ac 6-24" 360+ lb/ac	*****	*****	*****	*****	Cl		Cl		Cl				
Boron	1.0 ppm	*****	*****	*****	*****	S	0	S	0	S	0			
Zinc	0.68 ppm	*****	*****	*****	*****	B	0	B	0	B	0			
Iron						Zn	5 Broadcast	Zn	5 Broadcast	Zn	5 Broadcast			
Manganese						Fe		Fe		Fe				
Copper						Mn		Mn		Mn				
Magnesium						Cu		Cu		Cu				
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Organic Matter	4.0 %	*****	*****	*****	*****	Soil pH		Buffer pH		Cation Exchange Capacity				
Soluble Salts	0- 6" 0.62 mho/cm 6-24" 1.04 mho/cm	*****	*****	*****	*****	8.4				% Base Saturation (Typical Range)				
										% Ca	% Mg	% K	% Na	% H

† CAUTION: SEED PLACED FERTILIZER CAN CAUSE INJURY †

AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

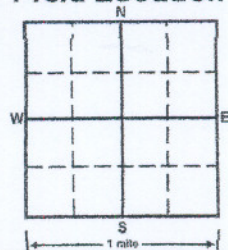


Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD 10 SAMPLE
 CNTY 12
 TWP 7 SECTION
 QTR 4 ACRES 80.0
 PREV. CROP Wheat-Spring

Field Location



SUBMITTED FOR:
 OSTERWICK FARMS

SUBMITTED BY: **TE3082**
 TERRAFLEX AG-NIVERV.
 25 158 AVE SOUTH
 BOX 356
 NIVERVILLE, MB
 ROA 1E0

REF# 10170170
 LAB# 41983
 BOX# 0

Date Sampled: **8/18/06** Date Received: **8/22/06** Date Reported: **8/31/06**

NUTRIENT IN THE SOIL		INTERPRETATION			
		Very Low	Low	Med	High
Nitrate	0-6"	33 lb/ac			
	6-24"	15 lb/ac	****	**	
	0-24"	48 lb/ac			
Olsen Phosphorus	26 ppm	****	****	****	****
Potassium	319 ppm	****	****	****	****
Chloride	0-24"	1772 lb/ac	****	****	****
	0-6"	120 +lb/ac	****	****	****
Sulfur	6-24"	360 +lb/ac	****	****	****
	Boron	2.4 ppm	****	****	****
Zinc	2.03 ppm	****	****	****	
Iron	18.4 ppm	****	****	****	
Manganese	1.0 ppm	****	****	****	
Copper	1.82 ppm	****	****	****	
Magnesium	1900 ppm	****	****	****	
Calcium	8483 ppm	****	****	****	
Sodium	337 ppm	****	****	****	
Org. Matter	3.9 %	****	****	****	
Carbonate(CCE)	11.1 %	****	****	****	
Sol. Salts	0-6"	2.04 mmho/cm	****	****	****
	6-24"	2.39 mmho/cm	****	****	****

1ST CROP CHOICE			2ND CROP CHOICE			3RD CROP CHOICE		
Canola-bu			Barley-Malting			Wheat-Spring		
YIELD GOAL			YIELD GOAL			YIELD GOAL		
50 BU			90 BU			50 BU		
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Broadcast/Maint.			Broadcast/Maint.			Broadcast/Maint.		
LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION	
N	127		N	92		N	87	
P ₂ O ₅	45	Broadcast	P ₂ O ₅	42	Broadcast	P ₂ O ₅	31	Broadcast
K ₂ O	0		K ₂ O	10	Band(Starter)*	K ₂ O	10	Band(Starter)*
Cl	0		Cl	0		Cl	0	
S	10	Broadcast	S	0		S	0	
B	0		B	0		B	0	
Zn	0		Zn	0		Zn	0	
Fe	0		Fe	0		Fe	0	
Mn	2	Broadcast	Mn	2	Broadcast	Mn	2	Broadcast
Cu	0		Cu	0		Cu	0	
Mg	0		Mg	0		Mg	0	
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
8.1		60.5 meq	(65-75) 70.1	(15-20) 26.2	(1-7) 1.4	(0-5) 2.4	(0-5)

Crop 1: High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 42 K2O = 45 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 31 K2O = 19 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

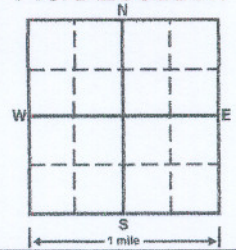


Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD 10 SAMPLE
 CNTY _____ SECTION _____
 TWP _____ ACRES 80.0
 QTR _____
 PREV. CROP Oats

Field Location



SUBMITTED FOR:
OSTERWICH FARMS

SUBMITTED BY: **TE3082**
TERRAFLEX AG-NIVERV.
25 158 AVE SOUTH
BOX 356
NIVERVILLE MB
ROA 1E0

REF# 8699212
 LAB# 57590
 BOX# 0

Date Sampled: 10/7/04

Date Received: 10/12/04

Date Reported: 10/14/04

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE			
		V.LOW	Low	Med	High	Barley-Matting		Wheat-Spring		Canola-bu			
	0-6" 9 lb/ac 6-24" 21 lb/ac 0-24" 30 lb/ac	***											
Nitrate													
Olsen Phosphorus	12 ppm	****	****	****	*								
Potassium	254 ppm	****	****	****	****								
Chloride	0-24" 1276 lb/ac	****	****	****	****								
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	****	****	****	****								
Boron	3.2 ppm	****	****	****	****								
Zinc	1.64 ppm	****	****	****	***								
Iron	22.2 ppm	****	****	****	****								
Manganese	1.6 ppm	****	***										
Copper	1.37 ppm	****	****	****	****								
Magnesium	1838 ppm	****	****	****	****								
Calcium	7121 ppm	****	****	****	****								
Sodium	331 ppm	****	****	****	****								
Org. Matter	4.5 %	****	****	****	****								
Carbonate(CCE)	12.3 %	****	****	****	****								
Soil Salts	0-6" 1.91 mmho/cm 6-24" 3.12 mmho/cm	****	****	****	****								
						1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE			
						Barley-Matting		Wheat-Spring		Canola-bu			
						YIELD GOAL		YIELD GOAL		YIELD GOAL			
						90 BU		50 BU		50 BU			
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Broadcast/Maint.		Broadcast/Maint.		Broadcast/Maint.			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
						N	110	N	105	N	145		
						P ₂ O ₅	54 Broadcast	P ₂ O ₅	43 Broadcast	P ₂ O ₅	68 Broadcast		
						K ₂ O	10 Band(Starter)*	K ₂ O	10 Band(Starter)*	K ₂ O	0		
						Cl	0	Cl	0	Cl	0		
						S	0	S	0	S	10 Broadcast		
						B	0	B	0	B	0		
						Zn	0	Zn	0	Zn	0		
						Fe	0	Fe	0	Fe	0		
						Mn	0	Mn	0	Mn	0		
						Cu	0	Cu	0	Cu	0		
						Mg	0	Mg	0	Mg	0		
						Lime		Lime		Lime			
						Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
						8.0		53.0 meq	% Ca (65-75) 67.2	% Mg (15-20) 28.9	% K (1-7) 1.2	% Na (0-5) 2.7	% H (0-5)

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 42 K2O = 45 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 31 K2O = 19 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 3: High salt levels may decrease yields in portions of this field. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

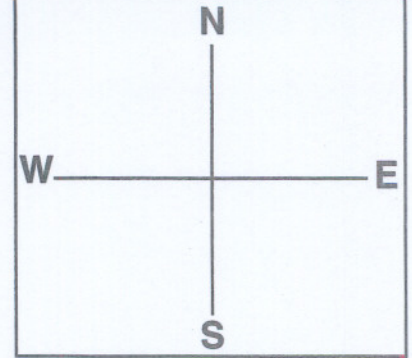
AGVISE[®]

LABORATORIES

P.O. BOX 510, NORTHWOOD, ND 58267
(701) 587-6010

SOIL TEST REPORT

FIELD 10 SAMPLE
COUNTY COUNTY SECTION
TWP TWP ACRES
QTR QTR
PREV CROP WHEAT



SUBMITTED FOR:

STAN TOWES

SUBMITTED BY:

TE3082

TERRAFLEX AG-NIVERV.
BOX 356

NIVERVILLE MB ROA 1E0

REF # 2403798

LAB # 59507

BOX # 1935

DATE SAMPLED

DATE RECEIVED 10/ 7/95

DATE REPORTED 10/ 9/95

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE			
		V LOW	LOW	MED	HIGH	WHEAT		SUGAR BEETS		SUGAR BEETS			
Nitrate N	0- 6"	22 lb/ac				YIELD GOAL 60 BU		YIELD GOAL 18 TONS		YIELD GOAL 20 TONS			
	6-24"	45 lb/ac				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	0-24"	67 lb/ac				P & K MAINTENANCE		P & K MAINTENANCE		P & K MAINTENANCE			
						LB /ACRE	APPLICATION	LB /ACRE	APPLICATION	LB /ACRE	APPLICATION		
						N	95	N	41	N	53		
Phosphorus	Nelson 19 ppm					P ₂ O ₅	37 Broadcast	P ₂ O ₅	31 Broadcast	P ₂ O ₅	35 Broadcast		
Potassium	251 ppm					K ₂ O	22 Broadcast	K ₂ O	54 Broadcast	K ₂ O	60 Broadcast		
Chloride						Cl		Cl		Cl			
Sulfur	0- 6" 50 lb/ac 6-24" 360+ lb/ac					S	0	S	0	S	0		
Boron	1.0 ppm					B	0	B	0	B	0		
Zinc	0.62 ppm					Zn	4 Broadcast	Zn	2 Broadcast	Zn	4 Broadca.		
Iron						Fe		Fe		Fe			
Manganese						Mn		Mn		Mn			
Copper						Cu		Cu		Cu			
Magnesium						Mg		Mg		Mg			
Calcium						Lime		Lime		Lime			
Sodium													
Organic Matter	4.4 %												
Soluble Salts	0- 6" 0.65 mmho/cm												
	6-24" 1.06 mmho/cm												
						Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
						8.3			% Ca	% Mg	% K	% Na	% H

AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

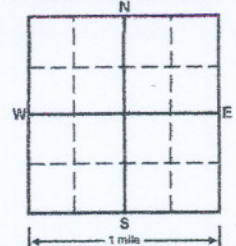


Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD 11 SAMPLE
 CNTY TWP SECTION
 QTR ACRES 100.0
 PREV. CROP Oats

Field Location



SUBMITTED FOR:
 OSTERWICK FARMS

SUBMITTED BY: **TE3082**
 TERRAFLEX AG-NIVERV.
 25 158 AVE SOUTH
 BOX 356
 NIVERVILLE, MB
 ROA 1E0

REF# 10242691
 LAB# 43735
 BOX# 0

Date Sampled: **8/18/06**

Date Received: **8/24/06**

Date Reported: **8/31/06**

NUTRIENT IN THE SOIL		INTERPRETATION				1ST CROP CHOICE		2ND CROP CHOICE		3RD CROP CHOICE	
		VLow	Low	Med	High	Wheat-Spring		Soybeans		Canola-bu	
Nitrate	0-6"	29 lb/ac	****	*	YIELD GOAL		YIELD GOAL		YIELD GOAL		
	6-18"	14 lb/ac			50 BU		40 BU		50 BU		
	0-18"	43 lb/ac			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
					Broadcast/Maint.		Broadcast/Maint.		Broadcast/Maint.		
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen Phosphorus	28 ppm	****	****	****	N	92	N	17	N	132	
Potassium	306 ppm	****	****	****	P ₂ O ₅	31 Broadcast	P ₂ O ₅	35 Broadcast	P ₂ O ₅	45 Broadcast	
Chloride	0-6"	162 lb/ac	****	****	K ₂ O	10 Band(Starter)*	K ₂ O	0	K ₂ O	0	
	6-18"	534 lb/ac	****	****	Cl	0	Cl	0	Cl	0	
Sulfur	0-6"	120 +lb/ac	****	****	S	0	S	0	S	10 Broadcast	
	6-18"	240 +lb/ac	****	****	B	0	B	0	B	0	
Boron	2.5 ppm	****	****	****	Zn	0	Zn	0	Zn	0	
Zinc	1.48 ppm	****	****	****	Fe	0	Fe	0	Fe	0	
Iron	21.2 ppm	****	****	****	Mn	0	Mn	0	Mn	0	
Manganese	2.6 ppm	****	****	****	Cu	0	Cu	0	Cu	0	
Copper	2.19 ppm	****	****	****	Mg	0	Mg	0	Mg	0	
Magnesium	2225 ppm	****	****	****	Lime		Lime		Lime		
Calcium	5610 ppm	****	****	****	% Base Saturation (Typical Range) % Ca (65-75) % Mg (15-20) % K (1-7) % Na (0-5) % H (0-5) 58.3 38.5 1.6 1.5						
Sodium	167 ppm	****	****	****							
Org. Matter	3.9 %	****	****	****	Soil pH	8.2	Buffer pH		Cation Exchange Capacity	48.1 meq	
Carbonate(CCE)	7.2 %	****	****	****							
Sol. Salts	0-6"	1.04 mmho/cm	****	****							
	6-18"	1.05 mmho/cm	****	****							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Crop Removal: P2O5 = 31 K2O = 19 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 2: Soybeans may become nitrogen deficient on fields with no soybean history and a nitrate level less than 60 lb/a. Extra nitrogen may be beneficial on these fields. The risk of the development of iron chlorosis on soybeans on this field is extreme based on the salt and carbonate levels. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.
 Crop 3: Crop Removal: P2O5 = 45 K2O = 23 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.