

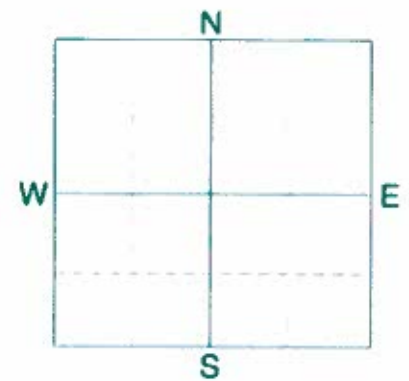
T4 < S 2021

CENTROL
CROP CONSULTING

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

SOIL TEST REPORT

FIELD ID **MJO-R 28-1**
SAMPLE ID **R/O SALTS**
FIELD NAME **KRAEMER 28**
COUNTY **BARNES**
TWP **RARITAN** RANGE
SECTION **28** QTR **N** ACRES **298.9**
HALF
PREV. CROP **Soybeans**



SUBMITTED FOR:

SUBMITTED BY: **OL0549**

REF # **3415759** BOX # **4000**
LAB # **NW121294**

Date Sampled _____ Date Received **09/28/2021** Date Reported **09/29/2021**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		Low	Low	Med	High									
Nitrate	0-6" 23 lb/acre					Corn-Grain		Corn-Grain		Wheat-Spring				
	6-24" 30 lb/acre					YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24" 53 lb/acre					180 BU		200 BU		75 BU				
Olsen Phosphorus	25 ppm					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
	213 ppm					Control		Control		Control				
Chloride	0-24" 852 lb/acre					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
	0-6" 120 +lb/acre					N 120		N 130		N 110				
Sulfur	6-24" 360 +lb/acre					P ₂ O ₅ 20	Broadcast	P ₂ O ₅ 20	Broadcast	P ₂ O ₅ 0				
	2.6 ppm					K ₂ O 0		K ₂ O 0		K ₂ O 0				
Boron	0.59 ppm					Cl	Not Available	Cl	Not Available	Cl	0			
	13.0 ppm					S 0		S 0		S 0				
Iron	5.9 ppm					B 0		B 0		B 0				
	0.93 ppm					Zn 5	Broadcast	Zn 5	Broadcast	Zn 0				
Magnesium	1950 ppm					Fe 0		Fe 0		Fe 0				
	7216 ppm					Mn 0		Mn 0		Mn 0				
Calcium	790 ppm					Cu 0		Cu 0		Cu 0				
	3.7 %					Mg 0		Mg 0		Mg 0				
Carbonate(CCE)	4.1 %					Lime		Lime		Lime				
	0-6" 3.82 mmho/cm					Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
Sol. Salts	6-24" 3.0 mmho/cm					0-6" 8.0		56.3 meq		% Ca	% Mg	% K	% Na	% H
						6-24" 8.0				(65-75)	(15-20)	(1-7)	(0-5)	(0-5)

General Comments: Soil texture is not estimated on high pH soils. Moderate sodium may cause soil dispersion, poor water movement, and reduced crop yield.

Crop 1: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. High salinity may decrease crop yield; extra nitrogen suggested for some crops. Crop nutrient removal: P2O5 = 67 K2O = 41

Crop 2: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. High salinity may decrease crop yield; extra nitrogen suggested for some crops. Crop nutrient removal: P2O5 = 74 K2O = 46

Crop 3: Previous crop nitrogen credit: 20.1 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. High salinity may decrease crop yield; extra nitrogen suggested for some crops. Crop nutrient removal: P2O5 = 47 K2O = 28

7/4-5 2021

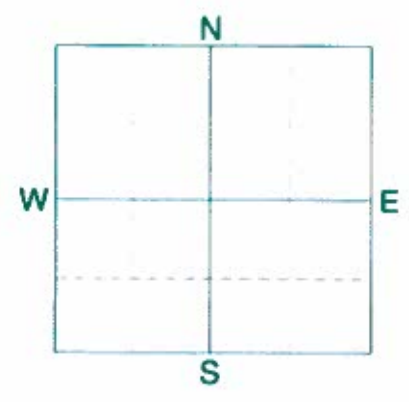


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SOIL TEST REPORT

FIELD ID **MJO-R 28-1**
 SAMPLE ID **YLW/BLUE RIDGES**
 FIELD NAME **KRAEMER 28**
 COUNTY **BARNES**
 TWP **RARITAN** RANGE
 SECTION **28** QTR **N** ACRES **298.9**
 HALF

PREV. CROP **Soybeans**



SUBMITTED FOR:

SUBMITTED BY: **OL0549**

REF # **3415760** BOX # **3845**
 LAB # **NW121295**

Date Sampled _____ Date Received **09/28/2021** Date Reported **09/29/2021**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		Very Low	Low	Med	High											
Nitrate	0-6"					Corn-Grain			Corn-Grain			Wheat-Spring				
	6-24"					YIELD GOAL			YIELD GOAL			YIELD GOAL				
						180 BU			200 BU			75 BU				
	0-24"					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
	7 lb/acre					Control			Control			Control				
	6 lb/acre					LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
	13 lb/acre					N	160		N	170		N	150			
Olsen Phosphorus	4 ppm					P ₂ O ₅	100	Broadcast	P ₂ O ₅	110	Broadcast	P ₂ O ₅	75	Broadcast		
Potassium	94 ppm					K ₂ O	105	Broadcast	K ₂ O	120	Broadcast	K ₂ O	50	Broadcast		
Chloride	0-24"					Cl		Not Available	Cl		Not Available	Cl	20	Broadcast		
		20 lb/acre				S	10	Broadcast	S	10	Broadcast	S	15	Broadcast		
Sulfur	0-6"					B	0		B	0		B	0			
	6-24"					Zn	5	Broadcast	Zn	5	Broadcast	Zn	0			
Boron	0.6 ppm					Fe	0		Fe	0		Fe	0			
Zinc	0.31 ppm					Mn	0		Mn	0		Mn	0			
Iron	5.3 ppm					Cu	0		Cu	0		Cu	2	Broadcast (Trial)		
Manganese	1.5 ppm					Mg	0		Mg	0		Mg	0			
Copper	0.6 ppm					Lime			Lime			Lime				
Magnesium	413 ppm					Soil pH			Cation Exchange Capacity			% Base Saturation (Typical Range)				
Calcium	4241 ppm					0-6"	8.3		24.9 meq			% Ca	% Mg	% K	% Na	% H
Sodium	11 ppm					6-24"	8.3					(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
Org. Matter	2.4 %											85.0	13.8	1.0	0.2	0.0
Carbonate(CCE)	9.2 %															
Sol. Salts	0-6"															
	6-24"															
	0.26 mmho/cm															
	0.5 mmho/cm															

General Comments: Soil texture is not estimated on high pH soils.

Crop 1: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 67 K2O = 41

Crop 2: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 74 K2O = 46

Crop 3: 44 lb potassium chloride (0-0-60-50Cl) = 20 lb chloride. Previous crop nitrogen credit: 20.1 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 47 K2O = 28

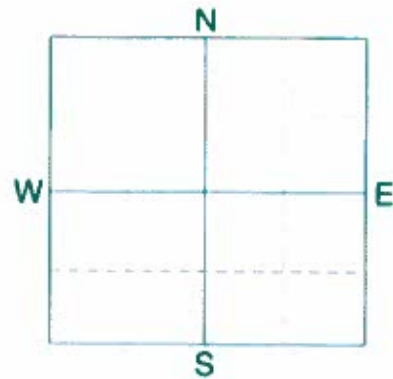
14-5 2021



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SOIL TEST REPORT

FIELD ID **MJO-R 28-1**
 SAMPLE ID **GREENS**
 FIELD NAME **KRAEMER 28**
 COUNTY **BARNES**
 TWP **RARITAN** RANGE
 SECTION **28** QTR **N** ACRES **298.9**
 HALF
 PREV. CROP **Soybeans**



SUBMITTED FOR:

SUBMITTED BY: **OL0549**

REF # **3415761** BOX # **4000**
 LAB # **NW121296**

Date Sampled

Date Received **09/28/2021**

Date Reported **09/29/2021**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		Low	Med	High								
Nitrate	0-6"	9 lb/acre			Corn-Grain		Corn-Grain		Wheat-Spring			
	6-24"	9 lb/acre			YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24"	18 lb/acre			180 BU		200 BU		75 BU			
					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
					Control		Control		Control			
					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen	6 ppm			N	155		N	165			
Potassium		184 ppm			P ₂ O ₅	85	Broadcast	P ₂ O ₅	95	Broadcast		
					K ₂ O	25	Broadcast	K ₂ O	30	Broadcast		
Chloride	0-24"	84 lb/acre			Cl		Not Available	Cl		Not Available		
	0-6"	120 +lb/acre			S	0		S	0			
	6-24"	360 +lb/acre			B	0		B	0			
Sulfur					Zn	5	Broadcast	Zn	5	Broadcast		
Boron		1.3 ppm			Fe	0		Fe	0			
Zinc		0.56 ppm			Mn	0		Mn	0			
Iron		18.9 ppm			Cu	0		Cu	0			
Manganese		3.2 ppm			Mg	0		Mg	0			
Copper		0.91 ppm			Lime			Lime				
Magnesium		934 ppm										
Calcium		4335 ppm			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
Sodium		36 ppm						% Ca	% Mg	% K	% Na	% H
Org.Matter		3.3 %			0-6"	7.9	30.1 meq	(65-75)	(15-20)	(1-7)	(0-5)	(0-5)
Carbonate(CCE)		5.4 %			6-24"	8.0		72.0	25.9	1.6	0.5	0.0
	0-6"	0.75 mmho/cm										
	6-24"	1.64 mmho/cm										
Sol. Salts												

General Comments: Soil texture is not estimated on high pH soils.

Crop 1: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 67 K2O = 41

Crop 2: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 74 K2O = 46

Crop 3: Previous crop nitrogen credit: 20.1 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 47 K2O = 28

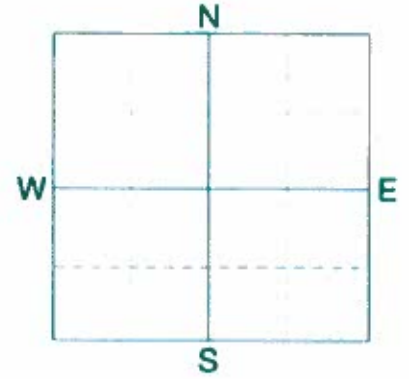
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SOIL TEST REPORT

FIELD ID **MJO-R 28-1**
 SAMPLE ID **MJO-R 28-1**
 FIELD NAME **KRAEMER 28**
 COUNTY **BARNES**
 TWP **RARITAN** RANGE
 SECTION **28** QTR **N** ACRES **298.9**
 HALF
 PREV. CROP **Soybeans**



SUBMITTED FOR:

SUBMITTED BY: **OL0549**

REF # **3798374** BOX # **20067**
 LAB # **NW157754**

Date Sampled

Date Received **10/13/2022**

Date Reported **10/17/2022**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		Low	Low	Med	High	Wheat-Spring		Corn-Grain		Sunflower				
Nitrate	0-6"	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	6-24"					80 BU	200 BU	3000 LBS						
	0-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
							Control		Control		Control			
							LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	7 ppm	*****				N 160		N 170		N 105				
Potassium	216 ppm	*****				P ₂ O ₅ 70	Broadcast	P ₂ O ₅ 90	Broadcast	P ₂ O ₅ 50	Broadcast			
Chloride	0-6"	*****				K ₂ O 0		K ₂ O 0		K ₂ O 0				
	6-24"					Cl 40	Broadcast	Cl	Not Available	Cl	Not Available			
Sulfur	0-6"	*****				S 0		S 0		S 0				
	6-24"					B 0		B 0		B 0				
Boron	1.0 ppm	*****				Zn 0		Zn 4	Broadcast	Zn 1	Broadcast			
Zinc	0.63 ppm	*****				Fe 0		Fe 0		Fe 0				
Iron	20.2 ppm	*****				Mn 0		Mn 0		Mn 0				
Manganese	4.0 ppm	*****				Cu 2	Broadcast (Trial)	Cu 0		Cu 1	Broadcast (Trial)			
Copper	0.63 ppm	*****				Mg 0		Mg 0		Mg 0				
Magnesium	648 ppm	*****				Lime		Lime		Lime				
Calcium	4289 ppm	*****												
Sodium	26 ppm	****												
Org.Matter	3.8 %	*****												
Carbonate(CCE)	2.7 %	*****												
Sol. Salts	0-6"	*****				Soil pH	Buffer pH	Cation Exchange Capacity		% Base Saturation (Typical Range)				
	6-24"					0-6" 7.6		27.5 meq	% Ca	% Mg	% K	% Na	% H	
	0.99 mmho/cm					6-24" 8.0			(65-75)	(15-20)	(1-7)	(0-5)	(0-5)	

General Comments: Medium-textured (CEC: 11-30 meq)
 Haney Soil Test Report will be mailed.

Crop 1: 88 lb potassium chloride (0-0-60-50Cl) = 40 lb chloride. Previous crop nitrogen credit: 20.1 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 50 K2O = 30

Crop 2: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 74 K2O = 46

Crop 3: Limited data on crop response to chloride. Previous crop nitrogen credit: 30 lb/acre N. Previous crop nitrogen credit may be adjusted for local conditions. May respond to starter P & K, even on high soil tests. Crop nutrient removal: P2O5 = 27 K2O = 33