

REPORT NO.	I.D. NO.	394195	DATE REC'D.	14-Jun-2022	DATE REPORTED	15-Jun-2022	SAMPLE WILL BE KEPT UNTIL	29-Jun-2022	LABORATORY NUMBER	CH87121 - CH87129
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Soil Analysis

Conducted by:

AgSource Laboratories

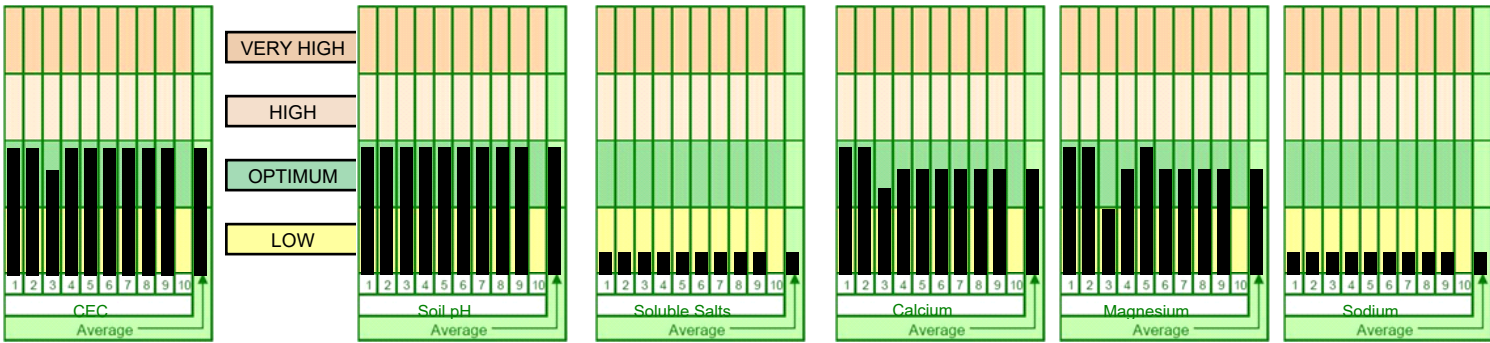
THIS ANALYSIS RUN FOR:
 Reinders/Dean Musbach
 7428 Trailwood Drive
 Minocqua, WI 54548

THIS ANALYSIS REQUESTED BY:
 KEWEENAW RESORT GC
 COPPER HARBOR, MI

CODING INFORMATION

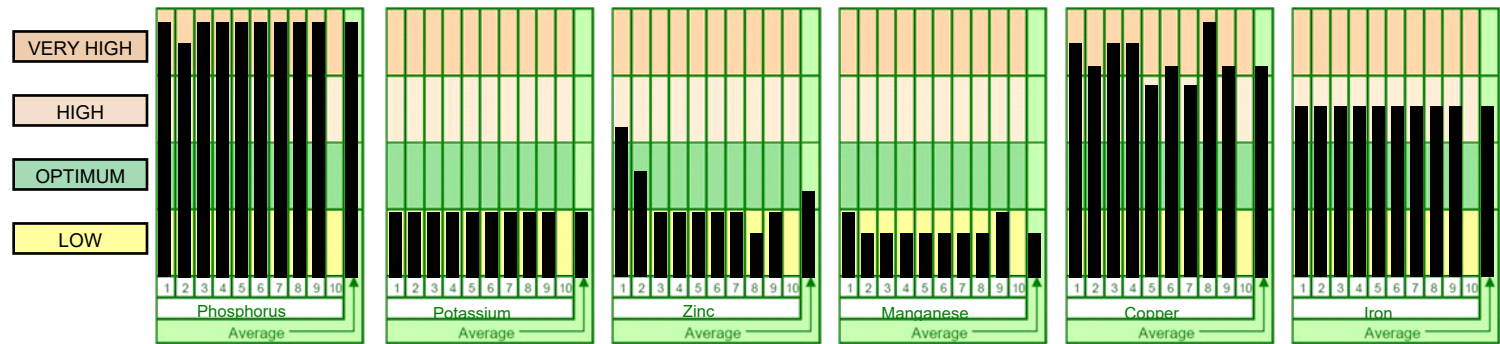
Sample Description	Composite Information	Plant Variety	Sample Nature
1 GRN1		GD	
2 GRN2		GD	
3 GRN3		GD	
4 GRN4		GD	
5 GRN5		GD	
6 GRN6		GD	
7 GRN7		GD	
8 GRN8		GD	
9 GRN9		GD	
10		GD	

NUTRIENT RESULTS											AVERAGES
Code	1	2	3	4	5	6	7	8	9	10	
Sample Description	GRN1	GRN2	GRN3	GRN4	GRN5	GRN6	GRN7	GRN8	GRN9		
CEC	9.8	9.3	7.1	9.1	9.1	8.7	8.6	8.8	8.8		8.8
Soil pH	6.8	6.8	6.8	6.7	6.8	6.8	6.8	6.7	6.7		6.8
Buffer pH											
Soluble Salts (mmhos/cm)	0.23	0.22	0.18	0.21	0.18	0.20	0.20	0.20	0.20		0.20
Exchangeable Calcium (ppm)	1502	1430	1108	1408	1371	1352	1320	1355	1369		1357
Exchangeable Magnesium (ppm)	240	217	155	213	233	197	211	205	210		209
Exchangeable Sodium (ppm)	5	6	5	7	6	5	6	6	4		6
% H Base Saturation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
% K Base Saturation	2.8	3.0	2.9	2.6	2.7	2.9	2.9	3.1	2.6		2.8
% Mg Base Saturation	20.4	19.5	18.3	19.6	21.4	19.0	20.4	19.4	19.8		19.8
% Ca Base Saturation	76.6	77.2	78.5	77.5	75.6	77.9	76.4	77.2	77.4		77.1
% Na Base Saturation	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2		0.3



NOTES

Code →	1	2	3	4	5	6	7	8	9	10	AVERAGES
Available Phosphorus (ppm)	119.0	82.0	94.0	122.0	94.0	115.0	119.0	101.0	119.0		107.2
Exchangeable Potassium (ppm)	105.7	108.7	79.5	91.0	94.6	97.4	97.2	107.0	90.8		96.9
Available Zinc (ppm)	6.6	4.9	3.8	3.8	2.9	3.1	3.6	2.6	3.1		3.8
Available Manganese (ppm)	5.3	3.9	4.6	4.2	3.3	4.2	3.4	4.3	4.9		4.2
Available Copper (ppm)	5.9	5.2	6.2	5.9	4.9	5.3	4.7	9.5	5.6		5.9
Available Iron (ppm)	72.3	65.8	53.5	70.0	72.2	57.6	68.6	68.3	69.8		66.5



NUTRIENT RANGE BAR CHART

* RECOMMENDATIONS											AVERAGES
Code →	1	2	3	4	5	6	7	8	9	10	
Sample Description	GRN1	GRN2	GRN3	GRN4	GRN5	GRN6	GRN7	GRN8	GRN9		
Sulfur Lbs/Acre											
Dolomite Lbs/1000 sq ft.											
AG-Lime Lbs/1000 sq ft.											
P ₂ O ₅ Lbs/1000 sq. ft.											
K ₂ O Lbs/1000 sq. ft.	0.9	0.8	0.9	1.0	0.9	0.9	0.9	0.8	1.0		0.9
Epsom Salts Lbs/1000 sq. ft.											
Gypsum Lbs/1000 sq ft.											
Zinc Lbs/Acre.	H	H	OPT	OPT	OPT	OPT	OPT	OPT	OPT		H
Manganese Lbs/Acre	6.6	7.2	7.0	7.1	7.5	7.1	7.5	7.1	6.8		7.1
Copper Lbs/Acre	H	H	H	H	H	H	H	H	H		H
Iron Lbs/Acre											

*** RECOMMENDATIONS**

These recommendations are based on the nutritional requirements of turfgrasses and are not applicable to any other crops.

Turf quality is dependent on many environmental and genetic factors. By following sound agronomic principles, the response to fertilizer will be more fully expressed.

The soil analysis nutrient recommendations and proposed application schedule are integral parts of the total soil nutrient analysis program offered by the Andersons.

COMMENTS

Nutrients designated as OPT, HI, VH, EX, or dashed, "No recommendation is needed".

Although Phosphorus is high, 0.5 Lbs of P2O5 applied through routine fertilization is not detrimental. However, very high levels (>48 ppm) can tie up iron, manganese, zinc and copper. At these high P levels, application of > 1.0 Lbs P2O5 may result in puffy turf, making 2 to 3 smaller applications will prevent this.

Single K2O applications should not exceed 1.0 Lbs/M (must be water immediately). Split applications are more efficient than single applications and space 30 to 60 days apart until desired amount is applied. If Magnesium saturation is greater the 20%, the Mg may affect the uptake of K.

Single application of epsom salts (MgSO4) not to exceed 10 Lbs/M. Applications should be watered in immediately. If making multiple applications space 30 to 60 days apart (spring and fall is appropriate). Although no P2O5 is recommended, an application of a "starter" fertilizer to be surface applied at planting time will be beneficial.