SOIL REPORT
FULL NUTRIENTS

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Date Received: 02/04/2019

Report date: 02/08/2019

Report Approved by: ZM   QC Approved by: LS

Sample Info:

Received by: IA

Sample Name: Garden

Lab ID: 8410 nf2

Results at a Glance:

See Page 2 for complete Interpretations & Recommendations

Analysis Type	Result	Optimal Range
pH	7.2	6 - 7
Electrical Conductivity * EC (dS/m)	0.50	0.5 - 2
Bulk Density (g/cm^3)	0.63	1.1-1.5
Buffer pH		

Soluble Plant Available Macronutrients

Analyte Type in ppm	Result	Optimal Range (ppm)
Calcium (Ca)	28	80 - 400
Magnesium (Mg)	10	30-70
Potassium (K)	90	60-200
Sodium (Na)	8	0 - 80
Nitrate (NO_3^--N)	36	70 - 200
Phosphate (PO_4^{3-}-P)	4	15 - 25

Micronutrients

Analyte Type in ppm	Result	Optimal Range (ppm)
Zinc (Zn)	23	14 - 30
Manganese (Mn)	3	8 - 30
Copper (Cu)	2	2 - 30
Iron (Fe)	37	25 - 50
Boron (B)	0.6	0.5 - 2.5
Chloride (Cl^-)	ND	<45

Total Plant Available Macronutrients

Analyte Type in ppm	Result	Optimal Range (ppm)
Calcium (Ca)		2000-4000
Magnesium (Mg)		100-500
Potassium (K)		150-800
Sodium (Na)		See ESP
Nitrate (NO_3^--N) ppm		
Phosphate (PO43--P) ppm		

Calculated Percent Exchangeable Cations

How Calcium, Magnesium, Sodium, and Potassium relate to each other. These will add up to 100%. By increasing one, others will decrease. If the percentages differ greatly from the given optimal ranges see comments for further instruction.

Analyte Type in Percent	Result	Optimal Range (%)
Calcium (Ca)	21	45
Magnesium (Mg)	7	9
Potassium (K)	66	38
Sodium (Na)	6	<5

Calculated Calcium to Magnesium Ratio

Analyte Type	Result	Optimal Ratio
Ca:Mg	1.8	>3

Calculated Salinity & Lime Requirement

Analysis Type	Result	Optimal Range
SAR (sodium absorption ratio)		<13
ESP (exchangeable sodium percent)		<15%
Lime Req* lbs/acre		100% Calcium Carbonate to raise pH

Organic Matter Panel

Analyte Type in ppm	Result	Optimal Range
Estimated Nitrogen Release ENR (lb/acre)	342	80-150
Organic Matter (%)	15	3-5
Organic Carbon (%)	9	8 - 20

*Lime Requirement is reported as 100% CaCO$_3$ to a pH of 6.5 - Compare to the % CaCO$_3$ in your liming product to determine application rate.

ND - No Detection - This means there was not a detected amount of this substance in your sample.

The reported lime application rate is intended to raise pH to 6.5, HOWEVER a soil can only process 5lb/100 sq-ft (10lb/100 cubic-ft) of liming agent per application. Applications that are larger than 5lb/100Ft2 should be split with one half applied now and the half at the end of the season before planting a cover crop.

For further details about your report give us a call to discuss a consultation. You can also check out our website at www.imperialanalytics.com for more information, helpful hints and disclaimers.