RHYS EDWARDS
0
0
0

Sustainable Soil Management

Solutions for Eco-nomically Sustainable Farming

0
0

SSM Soil Advisor — Ian Robertson — 07970 286420
Facts Fertiliser Advisor — Ian Robertson — 01653/12

Sample No:	Q23800
LAB No:	92871
Sample DATE:	02/03/2020
Report DATE:	29/06/2020

Field ID: SILAGE 3 | **1 Ha** | **CROP SOWN:** No Crop Given

A Restricted soil structure (Bd) | Soil test is assumed to be carried out for soil at | General plough depth

pH & CEC

Active pH	5.90	Priority; consider liming.
A moderately acidic soil. Crop dependant responses.		
Buffer pH	6.60	

Total Exchangable Capacity (TEC) — 6 = small, 30 = large. 15 viewed as average — Result: 9.82

Sand %	Silt %	Clay %
0	0	0
	0	

Stone content % if known

OM

Active Carbon	2-3%	1.63	
Organic Matter	Min >3%	10.10	Watch for copper lockup
Organic Carbon	ideal >5%	5.93	
Min required OM for structural integrity		3	

Dry BD 0.87 — Field Bulk density if known

Estimated NR 119 kg of NR from OM
T/C/ha Target 98 Found 116 T/C/Ha

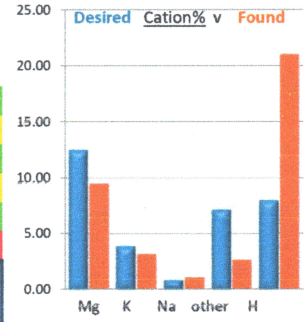
Cation Summary

	Soil management recommendations	Foliar management recommendations
pH	Liming is potentially reponsive (crop dependant) (view Buffer pH)	Foliar phosphate reponsive (Molybdenum in Brassicae and pulses)
Calcium	consider applying Soil Calcium in appropriate form	
Magnesium		apply foliar Magnesium
Potash	Question crop peak demands - 279.7 Kg/ha K20 Found	
Sodium		
Phosphates	0.0 kg/ha recommended - Apply solubilising bacteria	activate phosphate
Sulphates	Ensure Crop requirement Applied	Foliar apply sulphur if High N applications or sandy soil

Base Cation Saturation figures

Reported as kilograms/hectare - elemental (kg/ha)

Major Elements in Elemental form	CROP AVAILABLE NUTRIENTS kg/ha DESIRED	kg/ha Found	Difference	TOTAL IN SOIL Reserves ELEMENTAL kg/ha	% Base Cation Saturation Ratios (BCSR) DESIRED	FOUND
Calcium (Ca)	2585	2405	-180	4362	67.50	62.80
Magnesium (Mg)	287	217	-70	3044	12.50	9.46
Potassium (K)	293	233	-59	1457	3.92	3.12
Sodium (Na)	39	45	6	95	0.89	1.02
Other elements	7%	2.60		Minor Importance	7.19	2.60
Hydrogen	8%				8	21
Sulphate (S03)	90	82.26	-7	1143		
Phosphate (P205)	128	109	-20	2730	Excessive Total P reserves for the soils holding capacity	



General comment on Calcium: The calcium is 'root available' but review the result in conjunction with desired BCSR level.

Mg SP 9.46 (<15)

Cation Ratios

	RATIOS : 1	Target level	Found	Structural comments	Plant health comments
Calcium	Ca : Mg	5.40	6.6	Ideal bulk soil structure	Magnesium is low.
Magnesium	Mg: K	3.19	3.03	Soil should be workable.	Increase solution magnesium.
Potassium	K : Mg	1.02	1.07	consider foliar Mg	Potash should be increased.
Potassium	K : Na	4.40	3.07	Possible negative crop effects.	Limited issues from Na.

Sodium

Electrical Conductivity & Total Desolvable Salts	Sodium Adsorbtion Ratio		CROSS Catio Ratio of Stability		Estimated Sodium Potential (ESP)		Na : K
	Guide <4	0.17	Totals < 3	1.32	Guide result <6	1.02	Na should be lower than K
EC/TDS N/A			Available < 0.5	0.47	Potential dispersible soil surface in rain.		ratio OK

Biology

Phosphorus	1.59	% 5-8	Apply soil biology - (phospate solubilising bacteria)	Biological Treatment: Yes Required
C:P ratio	42.3	40to1	maintain humus	
pH	5.90		A fungal dominated environment.	crop dependant
Organic Carbon	5.93 %		Maintain Carbon Levels with Organic matter	Aim for soil carbon to be above 5%

Trace Elements

Predicted availability of trace elements			Found	Guides	Soil Treatments	Foliar treatment
Boron	B	mg/l	0.50	1.2-2.4	Apply Granular Boron	High Boron demanding crops only
Iron	Fe	mg/l	420.00	18 - 189	Apply products that create new roots	
Manganese	Mn	mg/l	27.60	18 -70		
Copper	Cu	mg/l	2.30	2.5 - 7	consider soil copper	YES
Zinc	Zn	mg/l	38.40	4 - 10.		
Chlorine	Cl	mg/l	26.00	9-20.		
Iodine	I	mg/l	0.00	1		
Molybdenum	Mo	mg/l	0.50	0.5-0.7	N/A	Brassicae/pulse/ clover respond to Mo
Cobalt	Co	mg/l	0.00	0.5-2.	not reported	

Index Figures

Standard UK index to ISO/IEC 17025-2005

mg/l	Index
21.2	2
97.4	1
91.6	2

UK phosphate is via the Olsen method

1.1 standard UK K:Mg Ratio OK

Morgan / Reams — Buffer pH 6.6

	Index	Mg/l
Phosphorus	0	0
Potassium	0	0
Magnesium	0	0
Calcium		0
Organic Matter	10.1	

Standard testing method for Southern Ireland

Modified Morgan

	mg/l	Index
Phosphorus	0	0
Potassium	0	0
Magnesium	0	0
Organic Matter	0	

Standard testing method for Europe