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SOIL ANALYSIS RESULTS

Head of Advisory Services: Mark Meares

Name : RICHARD CLARE

Address : SOIL SAMPLES

Date of Report : 16-JUN-2006

Report Number : 18074

Field Name	1 TOP	2 BOTTOM
Sample Number	118659	118660
Clay Content (% w/w)	33	28
Soil Type	Medium	Medium
Organic Matter (% w/w)	4.1	5.0
Acceptable Level	3.0%	3.0%
This sample is	OK	OK
Calcium Content (mg/kg)	2217	8401
Optimum Level	2000-8000	2000-8000
This sample is	OK	High
pH value - in Water	6.1	7.1
- in KCl	5.7	6.7
Optimum pH (Water)		
Potatoes, Oats, Rye	5.5 - 6.0	5.5 - 6.0
Total CaO required (t/ha)	0	0
Recommended Addition (t/ha/yr)	0	0
Grassland	6.0 - 6.5	6.0 - 6.5
Total CaO required (t/ha)	0	0
Recommended Addition (t/ha/yr)	0	0
Wheat, Beans, Brassicas	6.3 - 7.0	6.3 - 7.0
Total CaO required (t/ha)	1.6	0
Recommended Addition (t/ha/yr)	1.6	0
Peas, Barley, Lucerne	6.5 - 7.5	6.5 - 7.5
Total CaO required (t/ha)	3.6	0
Recommended Addition (t/ha/yr)	2.0	0
Phosphorus (mg/kg) (Sodium Acetate)	2.1	33.7
(Double Lactate) (DL)	10.5	214.3
(Citric Reserve)	82.7	628.2
(Olsen Alkali) (O)		
Arable and Grassland		
Optimum Level (DL or O)	100 - 350	100 - 350
Total P2O5 required (kg/ha)	537	0
Recommended Addition (kg/ha/yr)	180	0
Horticultural		
Optimum Level (DL or O)	200 - 500	200 - 500
Total P2O5 required (kg/ha)	1137	0
Recommended Addition (kg/ha/yr)	180	0

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Field Name	TOP	BOTTOM
Sample Number	118659	118660
Potash (Double Lactate) (mg/kg)	100.6	316.5
Acceptable Level		
Arable and Grassland	140 - 250	140 - 250
This sample is	Low	Normal
Acceptable Level		
Horticultural and Lucerne	160 - 350	160 - 350
This sample is	Low	Normal
Magnesium (Double Lactate) (mg/kg)	174.1	381.4
Arable and Grassland		
Optimum Level	40	40
Total MgO required (kg/ha)	0	0
Recommended Addition (kg/ha/yr)	0	0
Horticultural and Roots		
Optimum Level	80	80
Total MgO required (kg/ha)	0	0
Recommended Addition (kg/ha/yr)	0	0
Trace Elements		
Iron (mg/kg)	406	47
This sample is	High	Normal
Manganese (mg/kg)	135.3	278.2
This sample is	High	Normal
Zinc (mg/kg)	13.8	124.6
This sample is	Normal	Normal
Copper (mg/kg)	10.2	11.1
This sample is	High	Normal

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Field Name : 1 TOP
Sample Number : 118659

Soil Type

This soil has a clay content of 33% which gives it a medium texture. Medium soils will be intermediate in nature but, to maintain good structure and aeration, it will be particularly important to develop biological activity.

Ideally the level of organic matter for this soil texture should be greater than 3.0%. The levels of organic matter in this soil are adequate. This should help to retain moisture and plant nutrients.

Calcium and pH (Lime requirement)

The calcium levels are adequate in this soil. This should help to promote the biological activity within the soil.

Potatoes, Oats, Rye - The pH measured in this soil is satisfactory and no lime is required.

Grassland - The pH measured in this soil is satisfactory and no lime is required.

Wheat, Beans, Brassicas - The pH measured in this soil is low and lime is required to raise the pH to a suitable level. Apply the equivalent of 1.6 t/ha CaO.

Peas, Barley, Lucerne - The pH measured in this soil is low and lime is required to raise the pH to a suitable level. Apply the equivalent of 2.0 t/ha CaO.

Potential sources of calcium for raising pH values are chalk, limestone, magnesium limestone (Dolomitic) or calcified seaweed. The efficiency of your chosen liming material can be assessed from its quoted neutralising value or CaO equivalent (neutralising value of CaO = 100%). Excessive applications should be avoided, where necessary use split dressings and plough down the first application. Finely ground products have a faster action.

Phosphorus

For arable and grassland soils the levels of phosphorus are low in the available form in this field. Therefore, an application of rock phosphate is recommended to provide 537 kg/ha P₂O₅. However, the maximum recommended application rate is 180 kg/ha P₂O₅. Assuming the product used has a P₂O₅ content of 30% the application rate would be 600 kg/ha. The remainder can be applied in subsequent years.

For horticultural soils the levels of phosphorus are low in the available form in this field. Therefore, an application of rock phosphate is recommended to provide 1137 kg/ha P₂O₅. However, the maximum recommended application rate is 180 kg/ha P₂O₅. Assuming the product used has a P₂O₅ content of 30% the application rate would be 600 kg/ha. The remainder can be applied in subsequent years.

Note : Rock phosphate should not be applied within 4 months of liming. Avoid grazing the land receiving rock fertilisers until all the material has been washed off the leaves.

Potassium

For horticultural soils, the potassium levels are marginally low in this field. It may be necessary to review the cutting regimes and the manure spreading systems to maximise the nutrient recycling to balance the potassium offtake in the crops against the returns in the manures and composts.

Magnesium

For arable and grassland soils the levels of magnesium are satisfactory in the available form in this field.

For horticultural soils the levels of magnesium are satisfactory in the available form in this field.

Trace Elements

The high manganese may indicate compaction. This may be corrected by appropriate cultivations or the use of deep rooting green manures.

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The high iron may indicate water logging. This may be corrected by appropriate cultivations or the use of deep rooting green manures.

The high copper levels may reflect either poor aeration or past cropping or manuring history. These levels are not serious but you should avoid using conventional pig and poultry manures as these often contain high amounts of copper.

Comments

The balance between the different phosphorus fractions indicate that the biological activity of this soil is out of balance and attention should be given to improving the soil structure and pH, which in turn will enhance the biological activity and enable micro nutrients to be made available and help to improve soil aeration and drainage.

SOIL ANALYSIS RESULTS

Name : RICHARD CLARE

Date of Report : 16-JUN-2006

Address : SOIL SAMPLES

Report Number : 18074

Field Name : 2 BOTTOM

Sample Number : 118660

Soil Type

This soil has a clay content of 28% which gives it a medium texture. Medium soils will be intermediate in nature but, to maintain good structure and aeration, it will be particularly important to develop biological activity.

Ideally the level of organic matter for this soil texture should be greater than 3.0%. The levels of organic matter in this soil are adequate. This should help to retain moisture and plant nutrients.

Calcium and pH (Lime requirement)

The calcium levels are high in this soil. This will limit the biological activity within the soil and possibly lock up some micro nutrients.

Potatoes, Oats, Rye - The pH measured in this soil is satisfactory and no lime is required.

Grassland - The pH measured in this soil is satisfactory and no lime is required.

Wheat, Beans, Brassicas - The pH measured in this soil is satisfactory and no lime is required.

Peas, Barley, Lucerne - The pH measured in this soil is satisfactory and no lime is required.

Phosphorus

For arable and grassland soils the levels of phosphorus are satisfactory in the available form in this field. Therefore, no application of a phosphate fertiliser is required.

For horticultural soils the levels of phosphorus are satisfactory in the available form in this field. Therefore, no application of a phosphate fertiliser is required.

Potassium

For horticultural soils, the potassium levels are good in this field. It is important to maintain the potassium status by using farmyard manures or composts to balance the nutrients being removed from the field.

Magnesium

For arable and grassland soils the levels of magnesium are satisfactory in the available form in this field.

For horticultural soils the levels of magnesium are satisfactory in the available form in this field.

Trace Elements

There are no serious trace element problems.

Comments

The balance between the different phosphorus fractions indicate that the biological activity of this soil is out of balance and attention should be given to improving the soil structure and pH, which in turn will enhance the biological activity and enable micro nutrients to be made available and help to improve soil aeration and drainage.