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R600

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Client : THOMAS CONTRACTORS AG LTD
 GYWNS BARN
 LEIGHTON
 WELSHPOOL
 POWYS
 SY21 8LL

Sample Matrix : Agricultural Soil

Laboratory Reference

Card Number 65558/26

Date Received 11-Mar-26
 Date Reported 20-Mar-26

SOIL ANALYSIS REPORT

Laboratory Sample Reference	Field Details			Index			mg/l (Available)		
	No.	Name or O.S. Reference with Cropping Details	Soil pH	P	K	Mg	P	K	Mg
354303/26	1	FIELD 16 <i>No cropping details given</i>	5.8	1	2-	3	14.4	167	108
354304/26	2	FIELD 17 <i>No cropping details given</i>	6.2	1	2-	3	13.6	154	102

If general fertiliser and lime recommendations have been requested, these are given on the following sheets.

The analytical methods used are as described in DEFRA Reference Book 427

The index values are determined from the AHDB Fertiliser Recommendations RB209 9th Edition.

Released by Katie Dunn

On behalf of NRM

Date 20/03/26

MICRO NUTRIENT REPORT

DATE **20th March 2026**

SAMPLES FROM **THOMAS CONTRACTORS AG LTD,
GYWNS BARN, LEIGHTON**

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Reference: 65558/354303/26 Field Name: FIELD 16	Result	(*)	Deficient	Marginal	Target	Marginal	Excessive
Sodium (Ammonium Nitrate Extractable) mg/l	14.5	1					
Calcium (Ammonium Nitrate Extractable) mg/l	967.5	2					
Estimated Cation Exchange Capacity meq/100g	12.4	3					

Reference: 65558/354304/26 Field Name: FIELD 17	Result	(*)	Deficient	Marginal	Target	Marginal	Excessive
Sodium (Ammonium Nitrate Extractable) mg/l	12.1	1					
Calcium (Ammonium Nitrate Extractable) mg/l	1148.4	2					
Estimated Cation Exchange Capacity meq/100g	11.9	3					

Notes (*)

- (1) Sodium is a non essential plant nutrient. It is seldom, if ever, deficient except for Sugar Beet and Spinach. No crops show recognisable symptoms of sodium deficiency. If this soil is low in potassium then any crop of Sugar Beet, Fodder Beet, Red Beet, Mangels, Turnips or Celery will require extra potassium and will respond to the addition of sodium fertiliser. Sodium has a positive influence on the mineral nutrition of plants, especially those growing on low potassium soil. Response may be seen in Barley, Wheat, Oats, Peas, Cabbage, Kale and Spinach. Sodium can be applied as agricultural salt at 150kg/ha. Kainit may be used at 1t/ha and this will usually supply adequate amounts of sodium and potassium. Sodium levels in mineral soils are usually below 20mg/l available sodium. Sodium is easily leached from nearly all soil types and it is difficult to build up sodium levels over a period of years. The most responsive crops (beets) are usually grown in three or four year rotations and therefore need sodium fertiliser every time they are grown.
- (2) Calcium plays an important role in soil fertility and its status is reflected in the pH of the soil. Plants thrive best when the predominant base in the soil is calcium. If other bases, such as magnesium, potassium or sodium are present in amounts equal to or greater than calcium, nutritional disturbances can occur. Correction is by application of a calcium based liming material.
- (3) CEC level is Low (0-12). Soil maybe very low in organic matter. Typical of sandy soils.

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SAMPLED BY

Report reference 65558/26

Fertiliser Recommendations

The phosphate and potash recommendations shown below, are those required to replace the offtake and maintain target soil indices. The larger recommended applications for soils below target index will allow the soil to build up to this target index over a number of years. Not applying fertiliser to soils which are above target index will allow the soil to run down over a number of years to the target index.

The recommendation should be increased or decreased where yields are substantially more or less than that specified. The amount to apply can be calculated using the expected yield and values for the offtake of phosphate and potash per tonne of yield given in the RB209 9th edition.

All recommendations are given for the mid-point of each Index.

Where a soil analysis value (as given by the laboratory) is close to the range of an adjacent Index, the recommendation may be reduced or increased slightly taking account of the recommendation given for the adjacent Index. Small adjustments of less than 10 kg/ha are generally not justified.

Efficient use of P and K is most likely to be achieved on soils that are well structured and enable good rooting.

For visual evaluation of soil structure (VESS), a score on 1 or 2 would be considered adequate.

Don't forget to deduct nutrients applied as organic manures.

For Nitrogen recommendations please refer to the RB209 9th edition or seek advice from an FACTS qualified adviser.

Target Indices:

Arable, Forage, Grassland and Potato Crops: P Index 2, K Index 2-

(In rotations where most crops are Autumn-sown, soils are in good condition and P is applied annually, high index 1 can be an adequate target.)

Vegetables and Bulbs: P Index 3, K Index 2+

(If vegetables are only grown occasionally as part of an arable rotation, it would be most economic to target index 2 for arable and forage crops.)

Fruit Vines and Hops: P Index 2, K Index 2, Mg Index 2

(Note: Cider apples respond to K Index 3, Mg Index 3)

A lime recommendation is usually for a 20cm depth of cultivated soil or a 15cm depth of grassland soil. Where soil is acid below 20 cm and soils are ploughed for arable crops, a proportionately larger quantity of lime should be applied. However, if more than 10 t/ha is needed, half should be deeply cultivated into the soil and ploughed down, with the remainder applied to the surface and worked in.

For established grassland or other situations where there is no, or only minimal soil cultivation, no more than 7.5 t/ha of lime should be applied in one application.

In these situations, applications of lime change the pH below the surface very slowly. Consequently, the underlying soil should not be allowed to become too acidic because this will affect the root growth and thus limit nutrient and water uptake, which will adversely affect yield.

Field Name / Ref / Soil Type	Last Crop / Next Crop	P2O5	K2O	MgO	Lime (Arable)	(Grass)	
FIELD 16	Not Given / Not Given	Units/Acre			T/Ac	2.5	0.8
354303 /		Kg/Ha			Te/Ha	6.3	2.1

Field Name / Ref / Soil Type	Last Crop / Next Crop	P2O5	K2O	MgO	Lime (Arable)	(Grass)	
FIELD 17	Not Given / Not Given	Units/Acre			T/Ac	1.4	0
354304 /		Kg/Ha			Te/Ha	3.5	0

Fertiliser recommendations are based on **AHDB RB209 (Ninth Edition)**. If a nutrient is deficient and no recommendation is given, either no recommendation is given in RB209 or we have insufficient data to give a recommendation. Apply Lime to the nearest half Ton / Tonne.

NRM is a UKAS accredited laboratory to ISO/IEC 17025