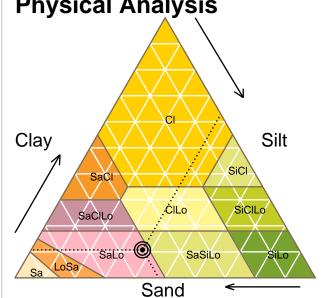


Released byLaboratory Manager on behalf of Lancrop Laboratories





Customer Sample Ref	PA CLIFTON HILL FIELD GOOD	Distributor Date Received	FARMING PARTNERS 07/10/2019 (Date Issued: 10/10/2019)
Sample No Crop	E321548/01 OILSEED RAPE	Area	5
Physic	cal Analysis		



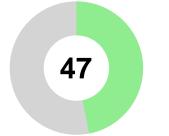
Analysis	Result (%)	
Sand	52.16	
Silt	37.08	
Clay	10.76	
Soil Type	SaLo	
	Sandy Loam	

Property	Assessment
Available Water	Low to Medium
Drainage Rate	Rapid
Inherent Fertility	Low to Medium
Potential C.E.C.	Low to Medium
Leaching Risk	High to Moderate
Warming Rate	Rapid

Biological Analysis

Biological Analysis	SOL	VITA®
Analysis	Result	Ideal
Solvita Burst CO2-C (ppm)	74	>70
Organic Carbon (%)	1.4	
Total Nitrogen (%)	0.130	
C:N Ratio	10.7	10-12
Calculated Parameters	Result	
Microbial Biomass (mg/kg)	1658	
Solvita Potentially Mineralizable Nitrogen (kg N/ha)	47	
Soil Assessment Score	47/100	

Soil Assessment Score



Microbial Biomass and Potentially Mineralizable N are calculated from the Solvita CO2-C Burst. The Potentially Mineralizable N assumes ideal conditions. Soil Assessment Score is calculated from biological, chemical and physical results.

pH impact on soil biology

	Your Result	
Increasing Acidity	Neutral	Increasing Alkalinity
Fungi thrive	Desirable fungal and bacterial activity	Fungal activity declines
Bacterial activity declines	Good earthworm activity	Bacteria thrive
Nutrient cycling drops	Nutrient cycling thrives	Nutrient cycling drops





Customer	PA CLIFTON	Distributor	FARMING PARTNERS 07/10/2019(Date Issued: 10/10/2019)
Sample Ref	HILL FIELD GOOD	Date Received	
Sample No Crop	E321548/01 OILSEED RAPE	Area	5

Analysis	Result	Guideline	Comments
рН	6.8	6.5	Adequate level. Maintain pH to ensure optimum nutrient nutrient availability and ideal conditions for an active soil biology.
Org. Matter - DUMAS (%)	2.4	3.0	Slightly low. Soils with medium to high levels of organic matter would generally be expected to have a good potential fertility and good structure, moisture retention and water infiltration. Investigate soil conditons to establish if soil management practices can improve levels of organic matter.
C.E.C. (meq/100g)	11.6	15.0	Cation Exchange Capacity indicates a slightly low nutrient holding ability - soil applied nutrients could be readily leached. Where possible foliar applied nutrients should be recommended.
Soil Respiration (mg/kg)	74	70	Typical aerobic microbial activity and mineralisation potential. Soil management practices may further improve biological fertility.
C:N Ratio	10.7	10.0	Normal. A low C:N ratio in the soil encourages microbial activity and the amount and rate of nutrients made available to the plants through mineralisation. A ratio of 10 - 12 indicates the potential for a good rate of decomposition of organic residue and retention of applied organic materials.
Texture Class	Sandy Loam		
Phosphorus (ppm)	101	16	(Index 6.0) Possible interference with availability of Fe,Cu,Zn.
Potassium (ppm)	157	121	(Index 2.3) 40 kg/ha K2O (32 units/acre).
Magnesium (ppm)	95	100	(Index 2.8) PRIORITY FOR TREATMENT.
Calcium (ppm)	1692	1600	Adequate level.
Sulphur (ppm)	4	15	PRIORITY FOR TREATMENT.
Sodium (ppm)	8	90	Not a problem for this crop.
Boron (ppm)	1.19	2.10	PRIORITY FOR TREATMENT.
Copper (ppm)	4.5	2.1	Adequate level.
Iron (ppm)	1104	50	Adequate level.
Manganese (ppm)	47	60	PRIORITY FOR TREATMENT.





Customer	PA CLIFTON	Distributor	FARMING PARTNERS
Sample Ref	HILL FIELD GOOD	Date Received	07/10/2019 (Date Issued: 10/10/2019)
Sample No Crop	E321548/01 OILSEED RAPE	Area	5
Crop	OILSEED RAFE		

Analysis	Result	Guideline	Comments
Molybdenum (ppm)	< 0.01	0.40	PRIORITY FOR TREATMENT.
Zinc (ppm)	15.3	4.1	Possible interference with availability of Iron.

Additional Comments

Where applicable soil applied P,K and pH recommendations are taken from AHDB Nutrient Management Guide (RB209)

Any indicated Lime Requirement assumes a medium textured soil. Additional technical bulletins are available at <u>www.lancrop.com</u>.

Please Note

Whilst every care is taken to ensure that the Results from Analysis are as accurate as possible, it is important to note that the analysis relates to the sample received by the laboratory, and is representative only of that sample. No warranty is given by the laboratory that the Results from Analysis relates to any part of a field or growing area not covered by the sample received. It is important to ensure that any soil, leaf, silage or fruitlet sample sent for analysis is representative of the area requiring analysis and that samples are obtained in accordance with established sampling techniques. A leaflet containing instructions on how to take soil, leaf, herbage, silage and fruit samples for analysis is available from the laboratory on request.





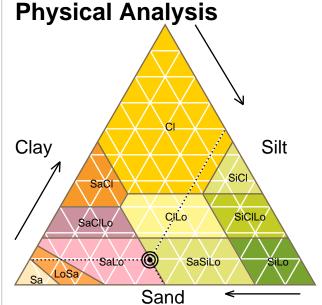
Customer	PA CLIFTC BRADELE		Distri	butor	FARMING PAR SPRINGFIELD ERCALL HEATI NR NEWPORT SHROPSHIRE TF10 8NQ	FARMHOUSE	
Sample Ref	HILL FIELD	D POOR	Date	Received	07/10/2019 (Da	ate Issued: 10/	10/2019)
Sample No Crop	E321548/0 OILSEED		 Area		5		
pH		6.7					
Org. Matter - D	UMAS (%)	2.4					
C.E.C. (med	q/100g)	12.8					
Soil Respiratio	n (mg/kg)	82					
C:N Ra	tio	10.7					
Texture C	lass	Sandy Loam					
						I	
Phosphorus	(ppm)	129					
Potassium	(ppm)	129					
Magnesium	(ppm)	95					
Calcium (opm)	1870					
Sulphur (p	opm)	3					
Sodium (p	opm)	8					
Boron (p	pm)	1.10					
Copper (p	opm)	4.0					
Iron (pp	m)	1260					
Manganese	(ppm)	25					
Molybdenum	n (ppm)	< 0.01					
Zinc (pp	m)	22.0					
						1	

Released byChris. Lindey. Laboratory Manager on behalf of Lancrop Laboratories





Customer Sample Ref	PA CLIFTON HILL FIELD POOR	Distributor Date Received	FARMING PARTNERS 07/10/2019 (Date Issued: 10/10/2019)
Sample No Crop	E321548/02 OILSEED RAPE	Area	5
Dhurel			



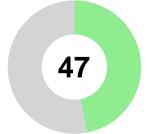
Analysis	Result (%)	
Sand	50.28	
Silt	40.10	
Clay	9.62	
Soil Type	SaLo	
	Sandy Loam	

Property	Assessment	
Available Water	Low to Medium	
Drainage Rate	Rapid	
Inherent Fertility	Low to Medium	
Potential C.E.C.	Low to Medium	
Leaching Risk	High to Moderate	
Warming Rate	Rapid	

Biological Analysis

Biological Analysis	SOLVITA®	
Analysis	Result	Ideal
Solvita Burst CO2-C (ppm)	82	>70
Organic Carbon (%)	1.4	
Total Nitrogen (%)	0.130	
C:N Ratio	10.7	10-12
Calculated Parameters	Result	
Microbial Biomass (mg/kg)	1834	
Solvita Potentially Mineralizable Nitrogen (kg N/ha) 52		
Soil Assessment Score	47/100	

Soil Assessment Score



Microbial Biomass and Potentially Mineralizable N are calculated from the Solvita CO2-C Burst. The Potentially Mineralizable N assumes ideal conditions. Soil Assessment Score is calculated from biological, chemical and physical results.

pH impact on soil biology

Your Result			
Increasing Asidity	Neutrel	Increasing Alkelinity	
Increasing Acidity	Neutral	Increasing Alkalinity	
Fungi thrive	Desirable fungal and bacterial activity	Fungal activity declines	
Bacterial activity declines	Good earthworm activity	Bacteria thrive	
Nutrient cycling drops	Nutrient cycling thrives	Nutrient cycling drops	





Customer	PA CLIFTON	Distributor	FARMING PARTNERS 07/10/2019(Date Issued: 10/10/2019)
Sample Ref	HILL FIELD POOR	Date Received	
Sample No Crop	E321548/02 OILSEED RAPE	Area	5

Analysis	Result	Guideline	Comments
рН	6.7	6.5	Adequate level. Maintain pH to ensure optimum nutrient nutrient availability and ideal conditions for an active soil biology.
Org. Matter - DUMAS (%)	2.4	3.0	Slightly low. Soils with medium to high levels of organic matter would generally be expected to have a good potential fertility and good structure, moisture retention and water infiltration. Investigate soil conditons to establish if soil management practices can improve levels of organic matter.
C.E.C. (meq/100g)	12.8	15.0	Cation Exchange Capacity indicates a slightly low nutrient holding ability - soil applied nutrients could be readily leached. Where possible foliar applied nutrients should be recommended.
Soil Respiration (mg/kg)	82	70	Typical aerobic microbial activity and mineralisation potential. Soil management practices may further improve biological fertility.
C:N Ratio	10.7	10.0	Normal. A low C:N ratio in the soil encourages microbial activity and the amount and rate of nutrients made available to the plants through mineralisation. A ratio of 10 - 12 indicates the potential for a good rate of decomposition of organic residue and retention of applied organic materials.
Texture Class	Sandy Loam		
Phosphorus (ppm)	129	16	(Index 6.7) Possible interference with availability of Fe,Cu,Zn.
Potassium (ppm)	129	121	(Index 2.0) 40 kg/ha K2O (32 units/acre).
Magnesium (ppm)	95	100	(Index 2.8) PRIORITY FOR TREATMENT.
Calcium (ppm)	1870	1600	Adequate level.
Sulphur (ppm)	3	15	PRIORITY FOR TREATMENT.
Sodium (ppm)	8	90	Not a problem for this crop.
Boron (ppm)	1.10	2.10	PRIORITY FOR TREATMENT.
Copper (ppm)	4.0	2.1	Adequate level.
Iron (ppm)	1260	50	Adequate level.
Manganese (ppm)	25	55	PRIORITY FOR TREATMENT.





Customer	PA CLIFTON	Distributor	FARMING PARTNERS
Sample Ref	HILL FIELD POOR	Date Received	07/10/2019 (Date Issued: 10/10/2019)
Sample No	E321548/02	Area	5
Crop	OILSEED RAPE		

Analysis	Result	Guideline	Comments
Molybdenum (ppm)	< 0.01	0.40	PRIORITY FOR TREATMENT.
Zinc (ppm)	22.0	4.1	Possible interference with availability of Iron.

Additional Comments

Where applicable soil applied P,K and pH recommendations are taken from AHDB Nutrient Management Guide (RB209)

Any indicated Lime Requirement assumes a medium textured soil. Additional technical bulletins are available at <u>www.lancrop.com</u>.

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