

Soil

field 6 soil

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Example report
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Analysis Investigation/ordernr: 700454/003709402 Date sampling: 01-11-2023 Date report: 14-11-2023

Results

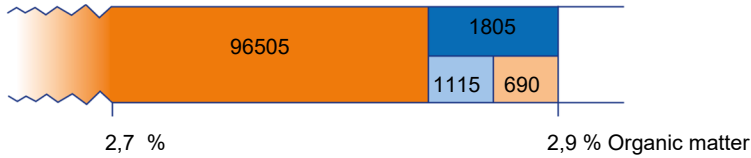
Results									Soil fertility advice (kg/ha)
	Unit	Result	Target value	low	rath.low	good	rath.high	high	
Chemical	Total N stock	kg N/ha	3660	3150 - 4720					
	C/N ratio		13	13 - 17					
	N-supplying capacity	kg N/ha	55	95 - 145					
	Total S stock	kg S/ha	680	690 - 1280					
	C/S ratio		69	50 - 75					
	S-supplying capacity	kg S/ha	10	20 - 30					
	Total P-stock	kg P/ha	1775	2220 - 3105					
	K-soil stock	kg K/ha	225	240 - 395					0
	Ca-soil stock	kg Ca/ha	2990	2980 - 3795					495
	Mg-soil stock	kg Mg/ha	305	240 - 370					0
Physical	Na-soil stock	kg Na/ha	39	55 - 101					
	Acidity (pH)		5,7	5,5 - 6,1					225
	C-organic	%	1,38						2760
	Organic matter	%	2,9						
	SOC/SOM ratio		0,48	0,45 - 0,55					
	Carbonate lime	%	1,7	2,0 - 3,0					
	Clay (<2 µm)	%	4						
	Silt (2-50 µm)	%	6						
	Sand (>50 µm)	%	85						
	Clay-humus (CEC)	mmol+/kg	58	> 44					
Biological	CEC-saturation	%	93	> 95					
	Ca-saturation	%	76	80 - 90					
	Mg-saturation	%	13	6,0 - 10					
	K-saturation	%	2,9	2,0 - 4,0					
	Na-saturation	%	0,9	1,0 - 1,5					
	H-saturation	%	< 0,1	< 1,0					
	Al-saturation	%	< 0,1	< 1,0					
	Soil crumbling	score	10,0	6,0 - 8,0					
	Soil slaking	score	7,6	6,0 - 8,0					
	Risk on wind erosion	score	5,0	6,0 - 8,0					
Microbial activity	mg N/kg	33	22 - 36						

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Results The soil based recommendations are one-time amounts to be applied in a 4-year period. The recommendations are expressed in the usual units (N, P₂O₅, K₂O, etc.) When the amount is high, we advice to split the amount in smaller doses to be applied during the 4-year period.

Legislation The fertilisation recommendations aim to achieve an agronomical optimum yield and crop quality. The recommendations do not take any legal restrictions into consideration.

Organic matter Figure: Organic matter balance



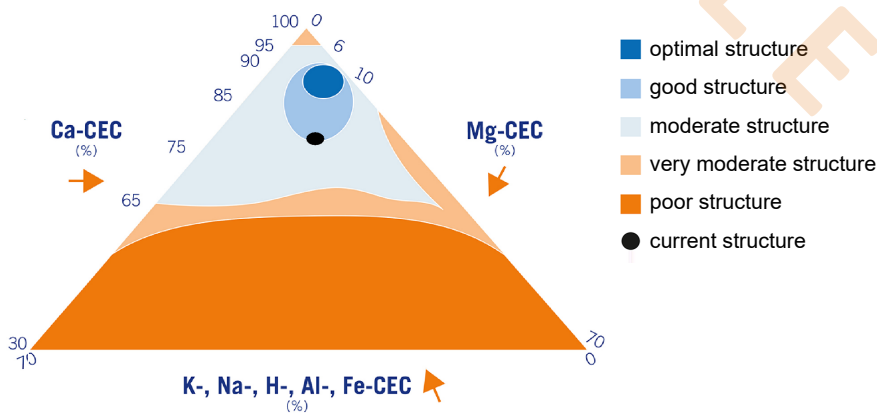
Yearly breakdown rate (percentage) of the total organic matter content (%): 1,8

Stock of organic matter which will remain after 1 year in the sampled layer if no (effective) organic matter is supplied.	Crop (residue)	Culture:	Input of effective organic matter
Total required supply of effective organic matter as a result of the degradation of the organic matter.	Ware potatoes		875
Supply through crop residues (average within provided rotation scheme or crops).	Temporary pasture		1600
Remaining to be supplied through e.g. animal manure, green manures and/or compost.	Silage maize		660
	Sugarbeet		1275
	Winter wheat		1640
	Beans		650
	Average input/year		1115
	In case of cereals we assume removal of straw.		

For increasing the soil organic matter content by 0.1%: 3390 kg effective organic matter per hectare is needed.

Physical The assessment of soil structure is based on the Ca-CEC, K-CEC, and Mg-CEC ratio. Actual soil structure is - of course - not merely depending on ratio, but also on weather conditions, moisture condition of the soil, and the weight of the machinery.

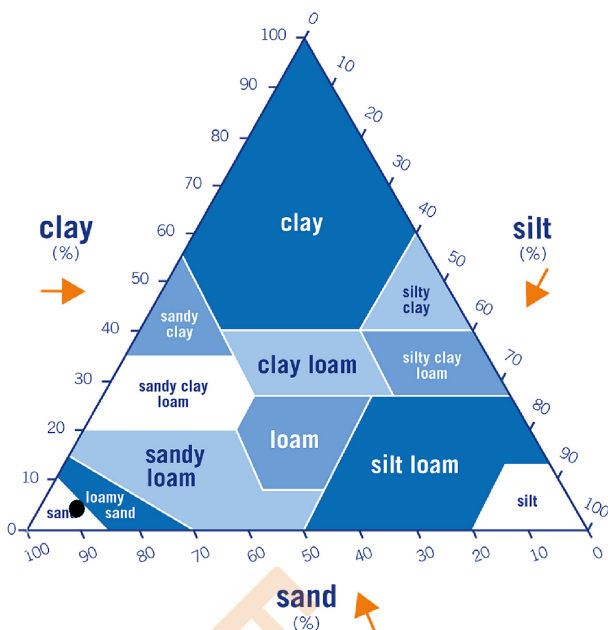
Figure: Structure triangle



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Physical

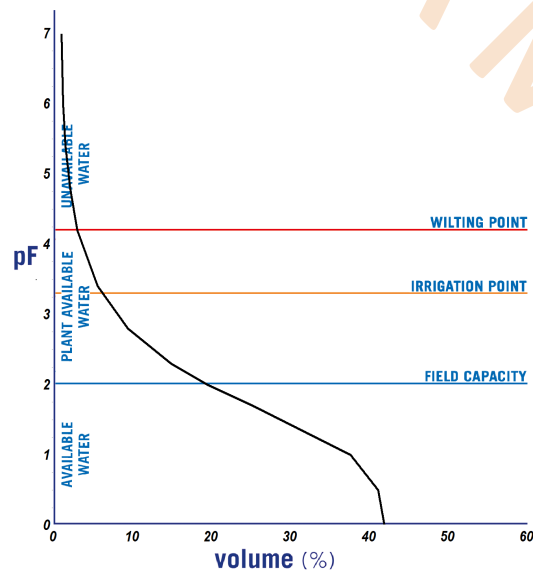
Figure: Texture triangle



Besides clay, the silt and sand fractions are presented as well. Clay is smaller than 2 micrometer (μm), silt particles are 2-50 μm and sand particles are larger than 50 μm . The relative distribution of soil particles is used to estimate the risk of slaking. Slaking causes the soil pores to be clogged with smaller particles and degrades soil structure. The risk of slaking is greatest at 10-20% clay.

Soil crumbling score is: good, however the evaluation of soil crumbling status is also depending on crop type. Considering the results, the chance of soil slaking is small.

Figure: Water retention curve



The amount of plant available water in the sampled layer is 41 mm. This is the maximum amount you should irrigate. All excess irrigation will drain off the parcel or will sink to deeper layers.

Crops have difficulties to obtain water when the actual moisture level is below pF 3,3. When you are able to measure the moisture level, start with irrigation if the moisture content of the parcel is at 6,2 % and irrigate 34 mm.

The actual moisture level can be measured by using a soil moisture sensor, or collect soil from ten spots in the parcel. Measure the weight of the moist soil and the weight after 24 h drying. The difference between moist and dry soil is an indication of the moisture level of the parcel.

Contact & info

Soil layer: 0 - 25 cm
 Sample was taken by: Eurofins Agro, Monsternemer
 Contact sample taking: Klantenservice Agro: 0888761010
 Sampling method: W-pattern, at least 40 sub samples, according to Eurofins Agro standard MIN 1000

If the following information is shown in the reports, this information may have been provided by the client and may affect the valuation, advice and/or analysis result:
 sampling depth, soil type, crop.

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Method		Result	Unit	Method	RvA
Results analyses	Total nitrogen stock	1080	mg N/kg	Em: NIRS	Q
	Total sulphur stock	200	mg S/kg	Em: NIRS	Q
	Total P-stock	120	mg P ₂ O ₅ /100 g	Em: NIRS	
	K-soil stock	1,7	mmol+/kg	Em: NIRS	
	Ca-soil stock	44	mmol+/kg	Em: NIRS	
	Mg-soil stock	7,4	mmol+/kg	Em: NIRS	
	Na-soil stock	0,5	mmol+/kg	Em: NIRS	
	Acidity (pH)	5,7		Em: NIRS	
	C-organic	1,38	%	Em: NIRS	Q
	Organic matter	2,9	%	Em: NIRS	Q
	C-inorganic	0,20	%	Em: NIRS	
	Carbonate lime	1,7	%	Em: NIRS	
	Clay (<2 µm)	4	%	Em: NIRS	
	Silt (2-50 µm)	6	%	Em: NIRS	
	Sand (>50 µm)	85	%	Em: NIRS	
	Clay-humus (CEC)	58	mmol+/kg	Em: NIRS	
	Microbial activity	33	mg N/kg	Em: NIRS	
	Bulk density	1356	kg/m ³	Em: NIRS	

The values stated on page 1 and 2 under 'Result' are calculated from the above mentioned analysis results.

Q Method accredited by RvA

Em: Method Eurofins Agro, Gw: Equivalent of, Cf: In conformity with

Results are reported in dry soil.

The analyses were done at Eurofins Agro, Wageningen (NL).

The results relate exclusively to the sample taken and received by Eurofins Agro, and to the material processed on 02-11-2023, and therefore to the sample analysed. For a detailed description of the sampling and analysis methods used, visit www.eurofins-agro.com

EXAMPLE