

FertilizationManager

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Example report
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Analysis	Sample/ordernr:	Date sampling:	Date report:
	700441/003709392	05-11-2025	18-11-2025

Results	Unit	Result	Target value	low	rath.low	good	rath.high	high
Chemical	Total N stock	kg N/ha	2260	1950 - 2920				
	C/N ratio		17	13 - 17				
	N-supplying capacity	kg N/ha	25	95 - 145				
	S-plant available	kg S/ha	6	20 - 30				
	Total S stock	kg S/ha	420	425 - 790				
	C/S ratio		89	50 - 75				
	S-supplying capacity	kg S/ha	5	20 - 30				
	P-plant available	kg P/ha	0,6	2,3 - 3,9				
	P-soil stock	kg P/ha	80	200 - 255				
	K-plant available	kg K/ha	60	90 - 140				
Physical	K-soil stock	kg K/ha	70	90 - 140				
	Ca-plant available	kg Ca/ha	30	95 - 220				
	Ca-soil stock	kg Ca/ha	620	1020 - 1300				
	Mg-plant available	kg Mg/ha	55	90 - 140				
	Mg-soil stock	kg Mg/ha	70	90 - 140				
	Na-plant available	kg Na/ha	13	19 - 39				
	Na-soil stock	kg Na/ha	15	19 - 39				
	Si-plant available	g Si/ha	5870	7760 - 33640				
	Fe-plant available	g Fe/ha	< 2610	3240 - 5820				
	Zn-plant available	g Zn/ha	4680	650 - 970				
	Mn-plant available	g Mn/ha	13370	7510 - 10350				
	Cu-plant available	g Cu/ha	30	50 - 85				
	Co-plant available	g Co/ha	55	5 - 10				
	B-plant available	g B/ha	< 100	205 - 285				
	Mo-plant available	g Mo/ha	< 10	130 - 6470				
	Se-plant available	g Se/ha	5,3	4,5 - 5,8				
	Acidity (pH)		5,1	5,3 - 5,9				
	C-organic	%	2,89					
	Organic matter	%	4,7					
	SOC/SOM ratio		0,61	0,45 - 0,55				
	Carbonate lime	%	1,6	2,0 - 3,0				
	Clay (<2 µm)	%	2					
	Silt (2-50 µm)	%	9					
	Sand (>50 µm)	%	83					
	Cation Exch. Cap.(CEC)	mmol+/kg	37	> 44				
	CEC-saturation	%	82	> 95				
	Ca-saturation	%	65	80 - 90				
	Mg-saturation	%	12	6,0 - 10				
	K-saturation	%	3,8	2,0 - 4,0				
	Na-saturation	%	1,4	1,0 - 1,5				
	H-saturation	%	0,3	< 1,0				
	Al-saturation	%	< 0,1	< 1,0				

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Results	Unit	Result	Target value	low	rath.low	good	very good	
Soil crumbling	score	10,0	6,0 - 8,0					
Soil slaking	score	7,9	6,0 - 8,0					
Risk of wind erosion	score	5,1	6,0 - 8,0					
						</		

Fertilization recommendations

The result is compared with an agricultural target value and is categorized as low, rather low, good, rather high, high. This is not an appreciation as meant in ISO 17025 (par. 7.8.6).

Legislation

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

Recommend.	Recommend.	Unit	
Soil-based recommendation (for the coming 4 years)			
Phosphate (P ₂ O ₅)	270	kg/ha	When recommendations are high, it is advised to split the amount during the 4 years, for instance supply half the amount biennially. The soil based recommendation is meant to level the soil stocks of phosphorus, potassium, calcium and magnesium to the required amounts.
Potassium (K ₂ O)	0	kg/ha	
Calcium (CaO)	270	kg/ha	
Magnesium (MgO)	0	kg/ha	The recommended lime application is based on an optimal pH of 5,6. For every tenth increase in pH a lime application is required of 50 kg/ha.
Lime (nw)	260	kg/ha	
Effective OM	3220	kg/ha	The amount of effective organic matter needed is calculated for a 4 year period. The yearly application of organic matter is calculated at the organic matter balance.

	Crop	Culture	Recommendation
Crop-based recommendation (annual)			
in kg/ha	Nitrogen (N)	Sports field	112
	Sulphate (SO ₃)	Sports field	53
	Phosphate (P ₂ O ₅)	Sports field	40
	Potassium (K ₂ O)	Sports field	65
	Calcium (CaO)	Sports field	85
	Magnesium (MgO)	Sports field	15
	Sodium (Na ₂ O)	Sports field	
	Zinc (Zn)	Sports field	0
	Manganese (Mn)	-	See the explanation.
	Copper (Cu)	Sports field	0,25
	Boron (B)	Sports field	0,5

Crop based recommendation

The crop-based recommendation is based upon the crop needs, average yield and climatic conditions and is corrected for soil nutrient stocks and the soil supplying capacity. During the growing season the SoilCropMonitor can be used for fertilization adjustments.

Explanation

The results and/or the recommendations of this analysis are valid until 2029

For more information please use the following link:

<https://www.eurofins-agro.com/en/soil-analysis-explanation>

The soil based recommendation aims to maintain the soil nutrient stocks. The K, Ca and Mg recommendation will optimize the balance at the cation-exchange-capacity (CEC). It is advised to spread the soil based recommendation for nutrients and lime application across a 4 year period. When you have applied the soil based recommendation a new soil based analysis can be used to update the concentration of the nutrient stocks.

The crop based fertilization will feed the crop and improve its quality. Due to higher/lower yields and possible losses (e.g leaching) the amount of plant available nutrients can fluctuate. Therefore, we advise you to carry out a crop based analysis to determine the actual amount of available nutrients and to update the fertilization recommendations.

Look carefully at the target values of the nutrients on page 1. If the target values indicate that one or more nutrient quantities are very low, consult your advisor.

We have assumed the following yields, when calculating the crop based recommendations:

Sports field -

When your yield differentiates from the above, it is recommended to adjust your fertilization accordingly

Nitrogen:

The N recommendation relates to an annual dose. If possible, we recommend splitting this N dose into several applications. You can use our SoilCheck soil test in season to determine whether subsequent applications are necessary. This test measures the plant-available N (mineral N) in the soil among other things.

In addition to the organic matter content, the advice for nitrogen also takes into account the nitrogen supply capacity and the pH. The nitrogen advice is based on a normal mowing intensity (150-350 hours) and an average mowing frequency (40-50 x per year). If the playing intensity or the mowing frequency is more extensive or intensive, adjust the advice according to the table below. If the grass cuttings are removed, increase the N advice by 20 kg N/ha.

Play intensity	Mowing frequency		
	High (>50 x/year)	Average (40-50 x/year)	Low (<40 x/year)
Intensive* (>350 hours)	-40 kg N/ha	-15 kg N/ha	+35 kg N/ha
Normal (150-350 hours)	-40 kg N/ha	see advice	+45 kg N/ha
Extensive (<150 hours)	-45 kg N/ha	+20 kg N/ha	+45 kg N/ha

* in case there is a good grass coverage, play intensity "normal" can be used

Sulphur:

Sulphur (S) is released by the degradation (mineralisation) of organic matter or manure. This mineralisation is performed by soil organisms. Soil organisms are not very active under colder conditions, which means not much S is released from the soil early in the spring. Therefore, it is sensible to fertilise with S for many early crops, even if the soil content is good or high.

Phosphate:

P-supplying capacity is 28 . The target range is 17 - 27
The P-buffering capacity indicates whether the P-soil stock is high enough to maintain the level of plant available P. When the buffering capacity (buffering power) is low, the plant available P will not remain on level during the growing season: it will decrease.

Potassium:**Calcium:**

Fertilization with calcium may benefit the soil structure. You can reduce the calcium soil based recommendation with the amount of calcium applied with the lime.

Manganese:

No Manganese deficiency is to be expected.

Lime:

Apply the lime prior to the crop that has the highest lime requirement.

Note: with liming calcium and magnesium can be added.

Clay-humus (CEC):

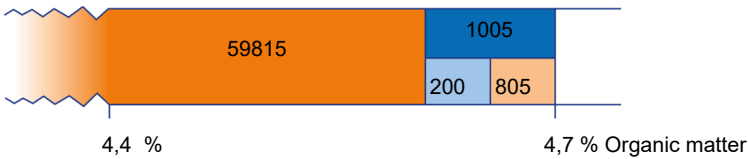
You can increase the CEC by applying organic matter and/or increase the pH of your soil.

Soil life:

The biological soil fertility is measured by 3 characteristics, the microbial biomass, the microbial activity, and the fungal/bacterial ratio.

The target values for the biological parameters are given based on the amount of organic matter in the soil.

Organic matter **Figure: Organic matter balance**



Yearly breakdown rate (percentage) of the total organic matter content (%): 1,7

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.	Sports field		200
Supply through crop residues (average within provided rotation scheme or crops).	Average input/year		200
Remaining to be supplied through e.g. animal manure, green manures and/or compost.			

For increasing the soil organic matter content by 0.1%: 1295 kg effective organic matter per hectare is needed.

Figure: Quality of the organic matter

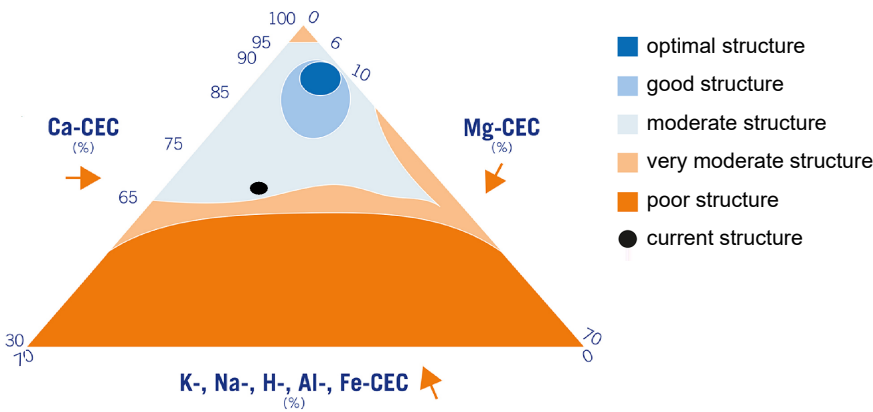


Organic matter consists primarily of C, N, P, S. If the organic matter contains relatively high amounts of N and/or S, this makes it attractive to soil organisms. Soil organisms happily eat this organic matter. N and S are released in the process and the amount of organic matter decreases slightly (dynamic organic matter). Organic matter can also contain a lot of C. This is generally less attractive to soil organisms (bacteria). As a result, the organic matter is not consumed as quickly by the soil organisms; making the organic matter more stable. Stable organic matter contributes - among other factors - to the workability of the soil and the looseness. Dynamic organic matter contributes primarily to the release of N and S and is therefore a source of these nutrients for the crop. The quality of the organic matter can be changed (gradually) by paying attention to the properties of soil improvers such as animal manure, compost and crop residues.

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.

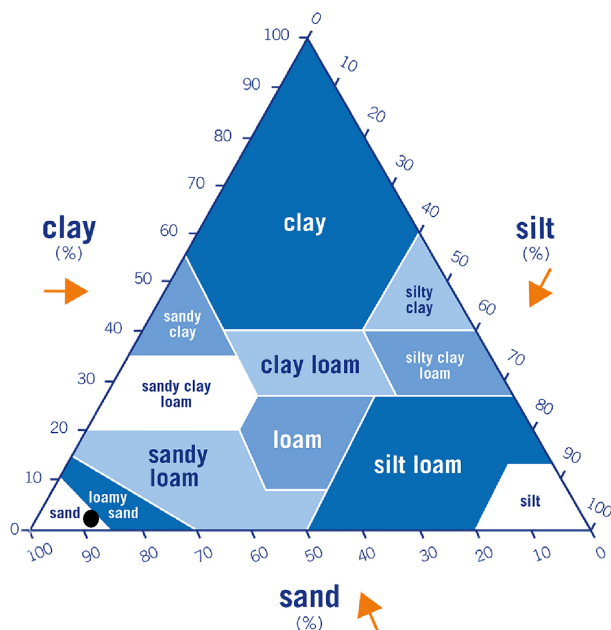
Figure: Structure triangle



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Physical

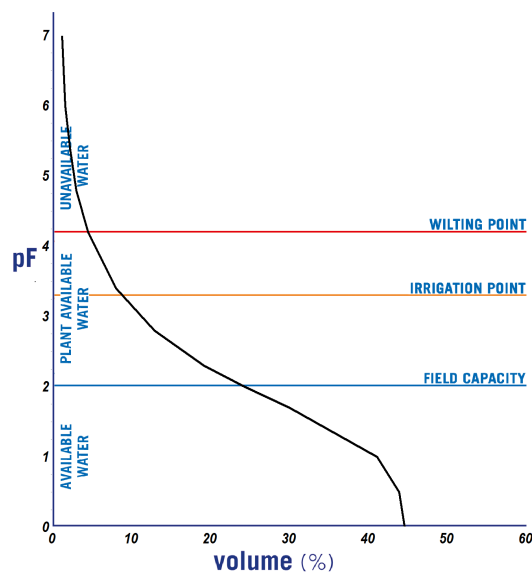
Figure: Texture triangle



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 dependent 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 20 mm. This is the maximum amount you should irrigate. All excess irrigation will drain off the field or will sink to deeper layers.

Field capacity (pF 2,0):	24,4	% moisture
Irrigation point (pF 3,3):	8,8	% moisture
Wilting point (pF 4,2):	4,6	% moisture

Crops have difficulties in obtaining 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 field is at 8,8 % and irrigate 16 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 field.

Contact & info

Soil layer: 0 - 10 cm
 Sample was taken by: Eurofins Agro, Monsternemer
 Contact sample taking: Customer Service Agro: 0888761010
 Sampling method: W-pattern, at least 40 sub samples, according to Eurofins Agro standard MIN 1000

After this report has been sent, the sample will be stored for another two weeks for you at Eurofins Agro, if the nature and test method of the sample so permit. Within this period you may submit a possible complaint.

If the following information is shown in the reports, this information has been provided by the client and this may affect the valuation, advice and/or analysis result:

crop, culture.

This also applies to the sampling depth when sampling is carried out by a third party.

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Method		Result	Unit	Method	RvA
Results	Total nitrogen stock	1750	mg N/kg	Em: NIRS	Q
analyses	S-plant available	4,4	mg S/kg	Em: CCL3	
	Total sulphur stock	325	mg S/kg	Em: NIRS	Q
	P-plant available	0,5	mg P/kg	Em: CCL3 (Gw NEN 15923-1)	Q
	P-soil stock	14	mg P ₂ O ₅ /100 g	PAL1: Gw NEN 5793	Q
	P-soil stock	6	mg P/100 g	PAL1: Gw NEN 5793	Q
	K-plant available	45	mg K/kg	Em: CCL3	Q
	K-soil stock	1,4	mmol+/kg	Em: NIRS	
	Ca-plant available	0,3	mmol Ca/l	Em: NIRS	
	Ca-soil stock	26	mmol+/kg	Em: NIRS	
	Mg-plant available	41	mg Mg/kg	Em: CCL3	Q
	Mg-soil stock	4,6	mmol+/kg	Em: NIRS	
	Na-plant available	10	mg Na/kg	Em: CCL3	Q
	Na-soil stock	0,5	mmol+/kg	Em: NIRS	
	Si-plant available	4500	µg Si/kg	Em: CCL3	
	Fe-plant available	< 2020	µg Fe/kg	Em: CCL3	
	Zn-plant available	3620	µg Zn/kg	Em: CCL3	
	Mn-plant available	10330	µg Mn/kg	Em: CCL3	Q
	Cu-plant available	23	µg Cu/kg	Em: CCL3	Q
	Co-plant available	44,0	µg Co/kg	Em: CCL3	Q
	B-plant available	< 76	µg B/kg	Em: CCL3	Q
	Mo-plant available	< 4	µg Mo/kg	Em: CCL3	
	Se-plant available	4,1	µg Se/kg	Em: CCL3	
	Acidity (pH)	5,1		Em: NIRS	
	C-organic	2,89	%	Em: NIRS	Q
	Organic matter	4,7	%	Em: NIRS	Q
	C-inorganic	0,19	%	Em: NIRS	
	Carbonate lime	1,6	%	Em: NIRS	
	Clay (<2 µm)	2	%	Em: NIRS	
	Silt (2-50 µm)	9	%	Em: NIRS	
	Sand (>50 µm)	83	%	Em: NIRS	
	Cation Exchange Cap.(CEC)	37	mmol+/kg	Em: NIRS	
	Microbial biomass	563	mg C/kg	Em: NIRS	
	Microbial activity	121	mg N/kg	Em: NIRS	
	Fungal biomass	266	mg C/kg	Em: NIRS	
	Bacterial biomass	249	mg C/kg	Em: NIRS	
	Bulk density	1294	kg/m ³	Em: NIRS	

The values stated on page 1 and 2 under 'Results' 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 06-11-2025 (receiving date), and therefore to the sample analysed. For a detailed description of the sampling and analysis methods used, visit www.eurofins-agro.com The measurement uncertainty of a method can be requested from Eurofins Agro.

The start of the analysis is the same as the receiving date.