

Basic characterization (validity for 8 to 10 years)

With the basic characterization, dynamic processes in the soil are analytically depicted and assessed. Measures and recommendations are derived from the results in order to optimize and sustainably preserve soil fertility. This analytical program is recommended to characterize the status quo of the fertility of the soil under investigation. Furthermore, it is possible to evaluate changes in agricultural practices, fertilization strategies etc.

All information and results of the analytical program “Current Nutrient Supply” is included in the program “Basic Characterization”.

You will receive the following information:

- Is the actual supply of nutrients sufficient to nourish the current or planned crops?
- Are the nutrients in equilibrium?
- Is it necessary to fertilize nutrients? Is it possible to mobilize nutrients (e.g. P)?
- Which acid buffer system is prevalent in the soil (liming yes/no)?
- What is the humus level of the soil? What is the quality of the humus?
- Which milieu conditions are in place for soil organisms?
- Is the potential of the specific site fully utilized?
- Is soil fertility preserved in a sustainable manner?
- Are the soil functions (e.g. ground water protection, flood protection) performed properly?
- Is there any hidden hazardous potential (e.g. potentially toxic substances)?
- How does the soil react to the application of liquid and solid biogas residues?

Range of analysed parameters:

Basic parameter/sorption complex:

KH value, coloration, turbidity, pH_{KCl} , pH_{water} , lime content, electrical conductivity (eC), C_{org} (=soil organic matter content), C/N, C/P, C/S (soil organic matter quality), cation exchange capacity ($\text{CEC}_{\text{actual}}$, $\text{CEC}_{\text{potential}}$), base saturation, substance ratios on the sorption complex (Ca, Mg, K, Na, Al, NH_4 , Fe, Mn, acidity).

Elements im Wasserextrakt:

Ca, Mg, K, Na, $\text{NH}_4\text{-N}$, $\text{NO}_3\text{-N}$, Al, Ba, P, Si, SO_4 , Cl, Fe, Mn, Cu, Zn, Co, Mo, B, As, Ni, Cr, Pb, Cd, Ti, V.

Elements im Austauschextrakt:

Ca, Mg, K, Na, $\text{NH}_4\text{-N}$, Al, Ba, P, Si, Fe, Mn, Cu, Zn, Co, Mo, B, As, Ni, Cr, Pb, Cd, Ti, V.

Elements in der Reservefraktion:

Ca, Mg, K, Na, Al, Ba, P, Si, Fe, Mn, Cu, Zn, Co, Mo, B, As, Ni, Cr, Pb, Cd, Ti, V.

5 phosphorus pools:

water-soluble, interchangeable, acid-soluble and organic phosphorus and total contents.