

Soil Life Monitor

Working on resilient and fertile soils

A healthy soil is the basis for success. The soil life is crucial in this respect. Soil Life Monitor maps out the micro-organisms, the invisible miracle workers. This enables you to work in a targeted manner on a soil that is less susceptible to diseases and pests, retains and supplies more nutrients, can store more moisture, and is more environmentally friendly. Retain and supply more nutrients, retain moisture better and store more CO₂.

The soil is literally and figuratively the basis for agriculture and horticulture. Soil is not a lifeless medium: a good, healthy soil is full of biological life. Not just worms, mites, springtails and the like, but also microorganisms. The so-called microbial biomass makes up about 40% of the biological component of soil and is invaluable. Soil Life Monitor brings the bacteria, fungi and protozoa in the soil.

Working on healthy soils

Microbial soil life is a complicated potpourri of organisms. Soil Life Monitor monitors the relationship between these organisms and the relationship with organic matter. In this way you can work in a targeted way to improve soil life,

The result:

- Greater resilience (fewer diseases and plagues)
- Better nutrient cycling
- Greater water-storage capacity
- More CO₂ storage

Internationally recognized method

Eurofins Agro uses the internationally recognized PLFA method to determine the microbial biomass and the various groups within it. The method is based on analyzing fatty acids in cell membranes. These are Phospholipid Fatty Acids (PLFA). The PLFA composition of the cell walls is unique to the various groups of microorganisms and they only occur in living organisms. In dead cells, these fatty acids break down rapidly degradation. Understanding which PLFAs are present thus provides information about both the amount of living biomass as well as which groups of microorganisms are present in the soil.

Also for greenhouse horticulture

Soil Life Monitor is also available for greenhouse soil, substrate and (drain) water.

What's on the report?

On the Soil Life Monitor report there are three categories to be found:

Overview Microorganisms

Microbial biomass

Total number of microorganisms (sum of the number of bacteria, fungi and protozoa).

Total bacteria

Total number of bacteria, measure for decomposition organic matter.

Gram-positive bacteria

Bacteria that are more resistant to drought.

Actinomycetes

Specific group, important for soil soil resistance.

Gram-negative bacteria

Bacteria that are more resistant to stress such as plowing and pesticide use.

Total Fungi

The total amount of fungi, build-up and decomposition organic matter.

Mycorrhiza

Group of fungi that live in association with plant roots. In exchange for sugar the plant receives water and nutrients (P and K).

Other fungi

The remaining fungi.

Protozoa

Single-celled organisms in the soil that feed primarily on bacteria. Forms food for larger organisms, releasing additional N.

Distribution types of organisms

Fungal/bacterial ratio

The ratio of fungal to bacterial biomass, expressed in mg C per kg of soil.

Measure of soil disturbance.

Gram(+)/Gram(-) ratio

The ratio of resistance to water stress (Gram positive) and resilience to plowing and pesticide use (Gram-negative).

PLFA diversity

Measure of diversity of organisms in the soil.

The higher this number, the more resilient the soil is.

Quality organic matter*

C-organic

The proportion of C is in the organic matter (OS).

C/OS ratio

The proportion of C organic in the total organic matter.

The higher the number the more stable the OS.

Organic matter figure

Quality of organic matter pictured.



A healthy soil life is the basis for a fertile soil. Soil Life Monitor makes it possible to compare soils with each other and provides tools to see through time whether a particular measure contributes to the stimulation of soil life. This is important for the realization of circular agriculture. The healthier the soil life, the better the nutrient cycle and the more resilient the soil is.

* On the greenhouse horticulture report 'Soil Life Monitor Water and substrate the parameter 'Quality organic matter' is not mentioned.