



Translated excerpt from "Revitaliser Les Sols" by Francis Buaille

16.6 Bacteria/fungi balance test

Operating principle: Bacterial and fungal mycelia have a different appearance and can be differentiated visually (by dyeing if necessary). A field kit combined with an online application enables you to obtain the information you need from your cell phone in less than an hour.

Objective and usefulness: Measure total bacterial biomass and identify bacterial/fungal balances in relation to agricultural practices. When it comes to microbiology, it's the harmony between different communities that's more important than the overall volume of activity. In cases where fungal families are under-represented (the most frequent case), corrective measures can be immediately envisaged and implemented: Ca/Mg amendments, addition of woody organic matter, etc. An American company, microBIOMETER®, is specialized in this technology: <https://microbiometer.com/>

How it works: 1) Using a multicomponent sample taken from the field to be studied, sieve the soil and place a sufficient quantity in a plastic bag. Remove coarse elements and any insufficiently decomposed organic matter. 2) Add the extraction powder to the test tube, then the water, and finally .5ml of soil 3) Whisk everything up and leave to stand 3) Take the liquid and place 3 drops on the test chart provided 4) At 2 minutes, take a picture of the test chart with your phone's camera, using a dedicated application downloaded beforehand 5) Send the picture, and the result appears almost instantly.

Advantages: A relatively inexpensive, rapid procedure that enables the effects of agricultural practices to be observed and corrective measures to be taken if necessary.

Limitations: Simplified detection can only indicate large masses and can under no circumstances provide information on fungal species or bacterial strains.