Soil Synergy

A diversity of living roots throughout the year provides habitat for soil biota and maintains the soil food web (SFW).

Clay particles have a negative ionic charge.

“Clay Domains” is a stack of parallel clay particles, held by ionic bonding & associated with humic substances.

“Humic Substances” are made by a process called humification (soil, water, biochemical and chemical reactions).

Chemical

The elements or chemical compounds that are present (Ca, Mg, K, Na, Cu, Al, H, H₂PO₄⁻, NH₄, HPO₄⁻, SO₄ and others) in the soil/clay domains are transformed by microbes and then taken up by plants. Microbes are essential for nutrient cycling.

Physical

Soil physical properties (porosity, infiltration, aggregation, texture) affect soil fertility by altering water movement, root penetration, and aeration. The ionic charge of clay domains can hold a variety of soil cations. Biologically created humic substances can retain ions and molecules on their surface and within their structures.

OBJECTIVE: A healthy soil is the result of a “Soil Health Management System” which promotes synergy among Biological, Chemical and Physical processes.


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