An Organic Approach to Soil:
Who’s down there, what are they doing, and what can we do to help them!
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What is soil?
Soil is “rotted” rock and decomposed organic matter
Soil is a living thing! (not a chemical sponge)
Soil is a water and nutrient storage medium
Soil is habitat – the most diverse habitat on the planet earth!!!

Humus - the Holy Grail of garden soil
What is it? - Humus is way-decomposed dead stuff
Different dead stuff breaks down at different rates
Simple VS complex substances
Brown stuff vs green stuff
Humus – hard to break-down organic matter that has amazing properties

What has humus done for me lately? - Creates a Complex, Diverse Habitat
• Holds water (up to 80% of its own weight)
• Makes sandy soils hold more water – builds structure
• Makes clay soils better drained – builds structure
• Buffers against pH extremes
• Retains nutrients for plant use
• Adds energy and carbon - “feeds the herd!”

Soil organisms – the cycle of life makes humus!
Producers – energy from the sun, carbon from the air (CO₂)
Consumers – get carbon and energy from consumers either directly or indirectly
Decomposers – consume dead materials – recycle nutrients for producers

The rhizosphere – where most of the action is in soil
~3mm thick zone surrounding plant roots - Plant/microbe symbiosis – plants feed the bugs, the bugs make nutrients available

Remember, feed the herd!!!
• Bacteria & Fungi
• Protozoa/nematodes
• Mites and other invertebrates
• Worms
• Voles/moles/gophers

…all require food and energy in the form of organic matter