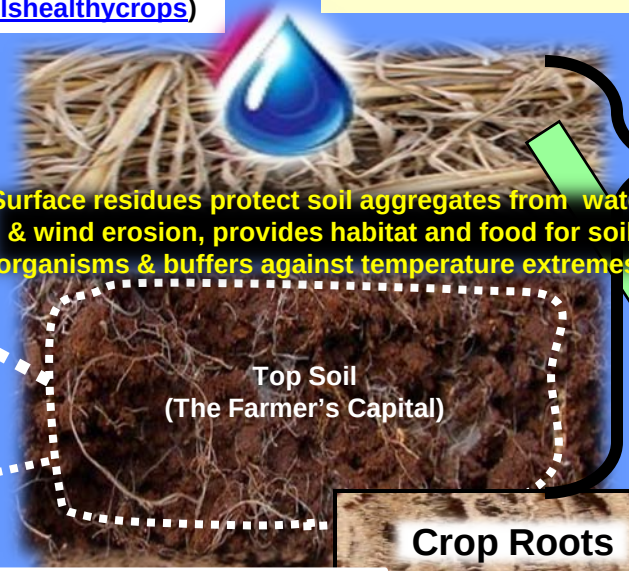
For an excellent soils demo and discussion on Soil Health, view (http://vimeo.com/channels/healthysoilshealthycrops)

Intro to Section 1 (1j – Water-Stable Soil Aggregates: Home to a Healthy Soil Food Web)

Well-aggregated soils (sustainable soil health, crop productivity & quality)



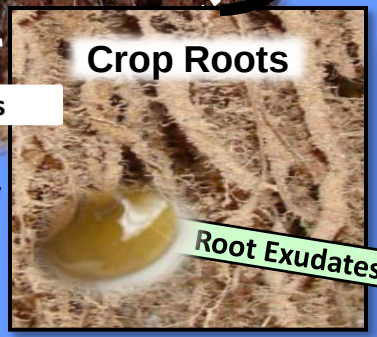
Surface Residues and Top Soil (location of major Soil Food Web biological activity)

Earthworm Casts form water-stable aggregates

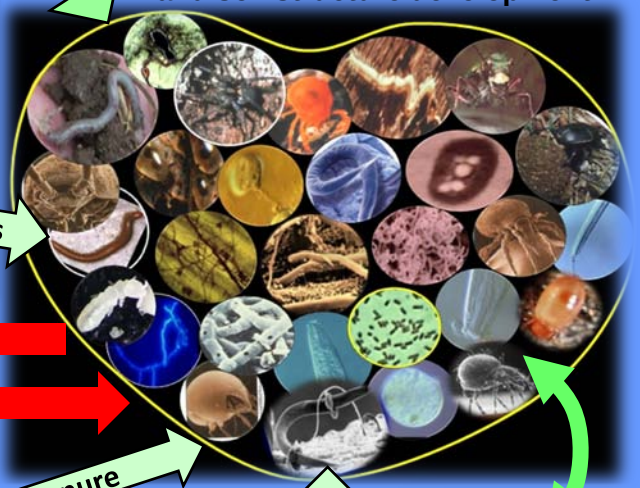
Crop Residues

Emphasis on feeding the Soil Food Web to facilitate nutrient cycling and soil structure development.

Fine root hairs bind soil particles & aggregates



Root Exudates



BIODIVERSITY WITH MINIMAL SOIL DISTURBANCE DRIVES SOIL HEALTH.

Soil Humus forms water-stable aggregates

Fungal hyphae binds soil particles & aggregates

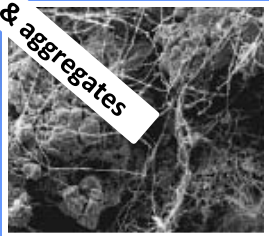
Glomalin forms water-stable aggregates

Aggregates held together by glue-like products produced by soil microbes

SOIL HUMUS

Humus formation

Humus decomposition



Manure

Compost

Predator-Prey interactions (nutrient cycling example: predatory mite eating a springtail)

Ref. Sustainable Soil Management (ATTRA Soil Systems Guide)

rudy.garcia.2011

Agronomy Tech Note 76 (http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html)