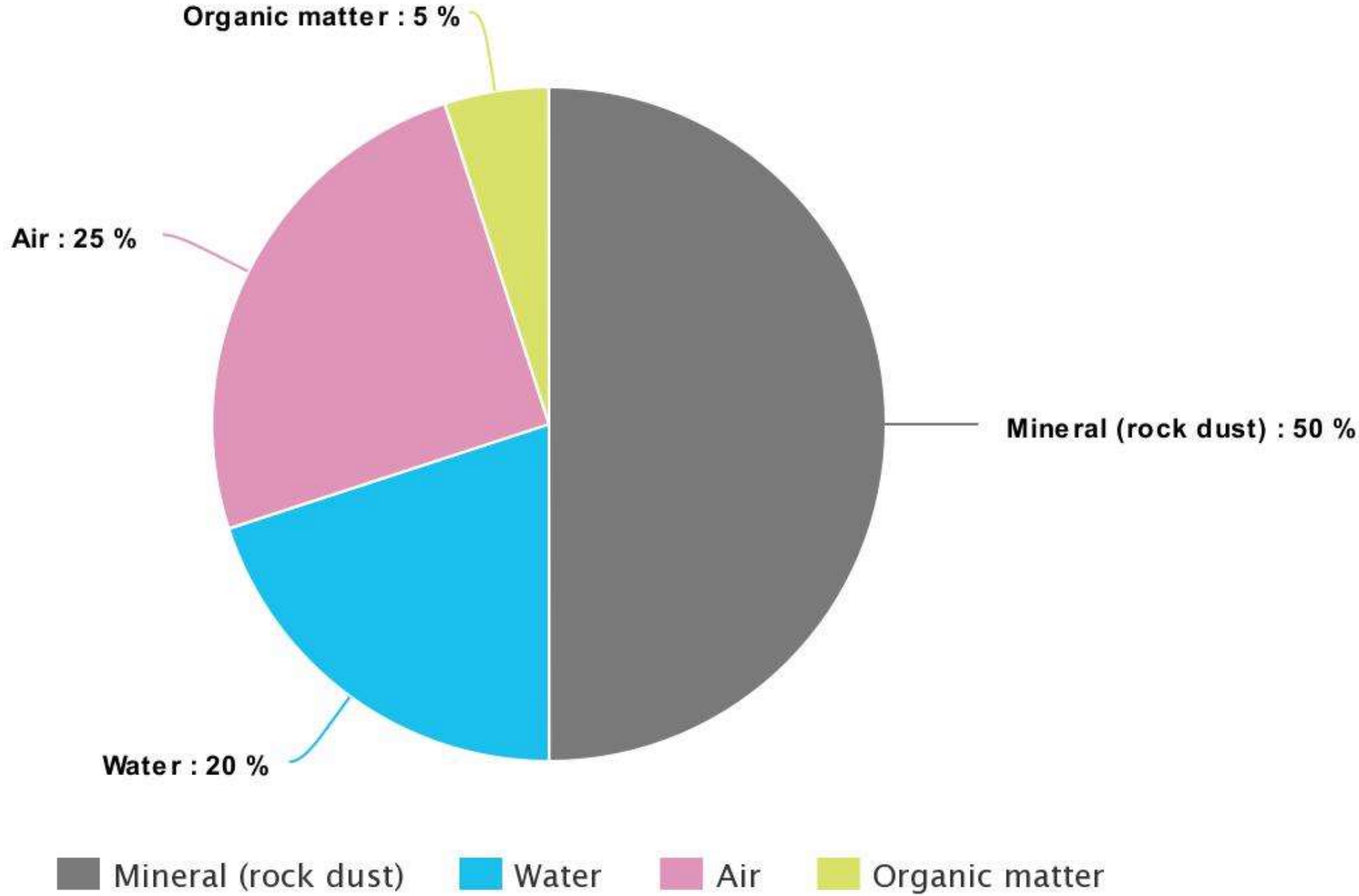
What is healthy soil – and how does compost fit in?

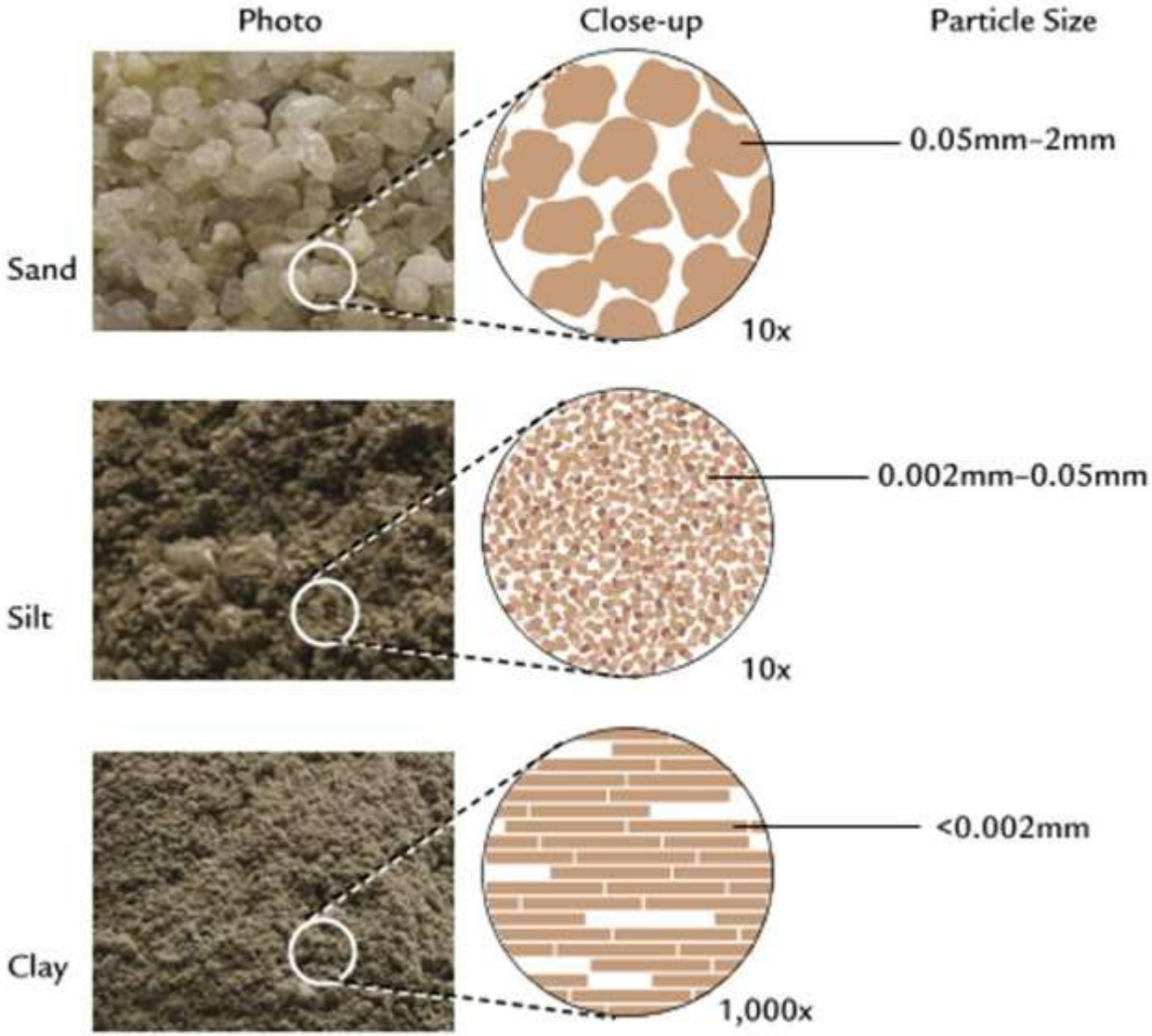
What functions does healthy soil perform?

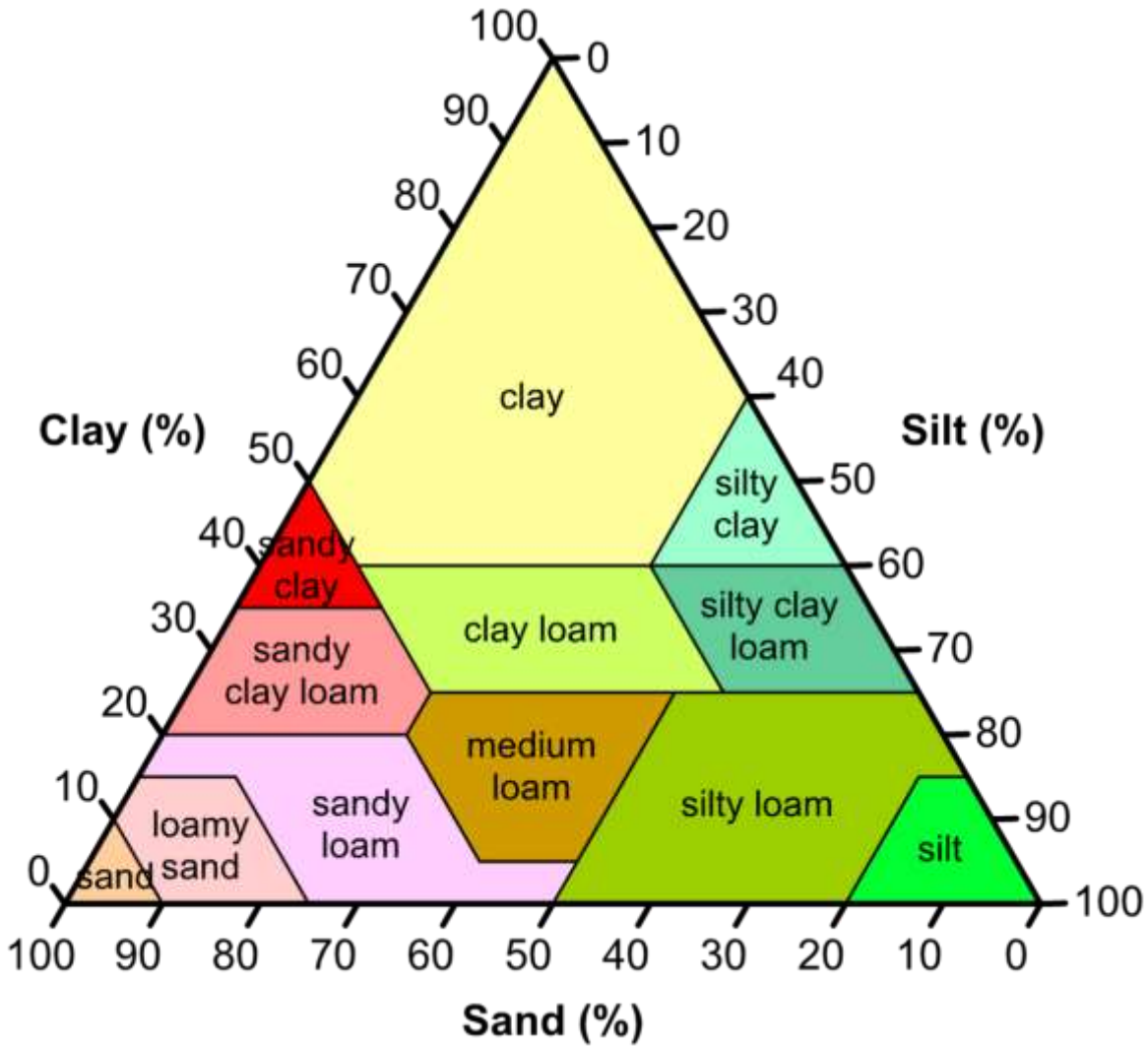
- Nurturing plant roots
- Decomposing dead plants and animals
- Habitat for an ecosystem of soil organisms
- Soaking up and filtering water
- Storing a pool of carbon

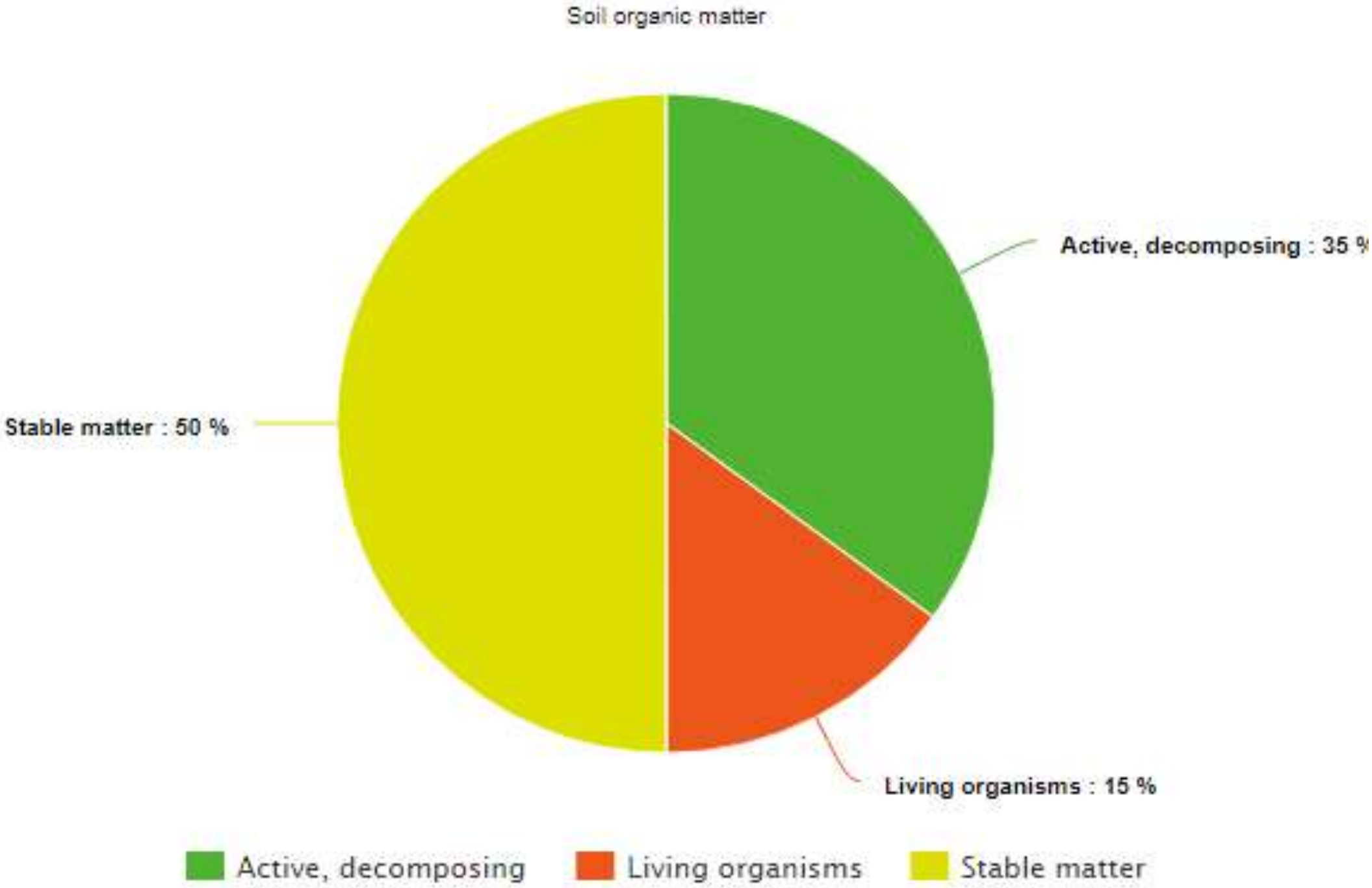
Soil


Organic matter : 5 %
Air : 25 %
Mineral (rock dust) : 50 %
Water : 20 %
Mineral (rock dust)
Water
Air
Organic matter

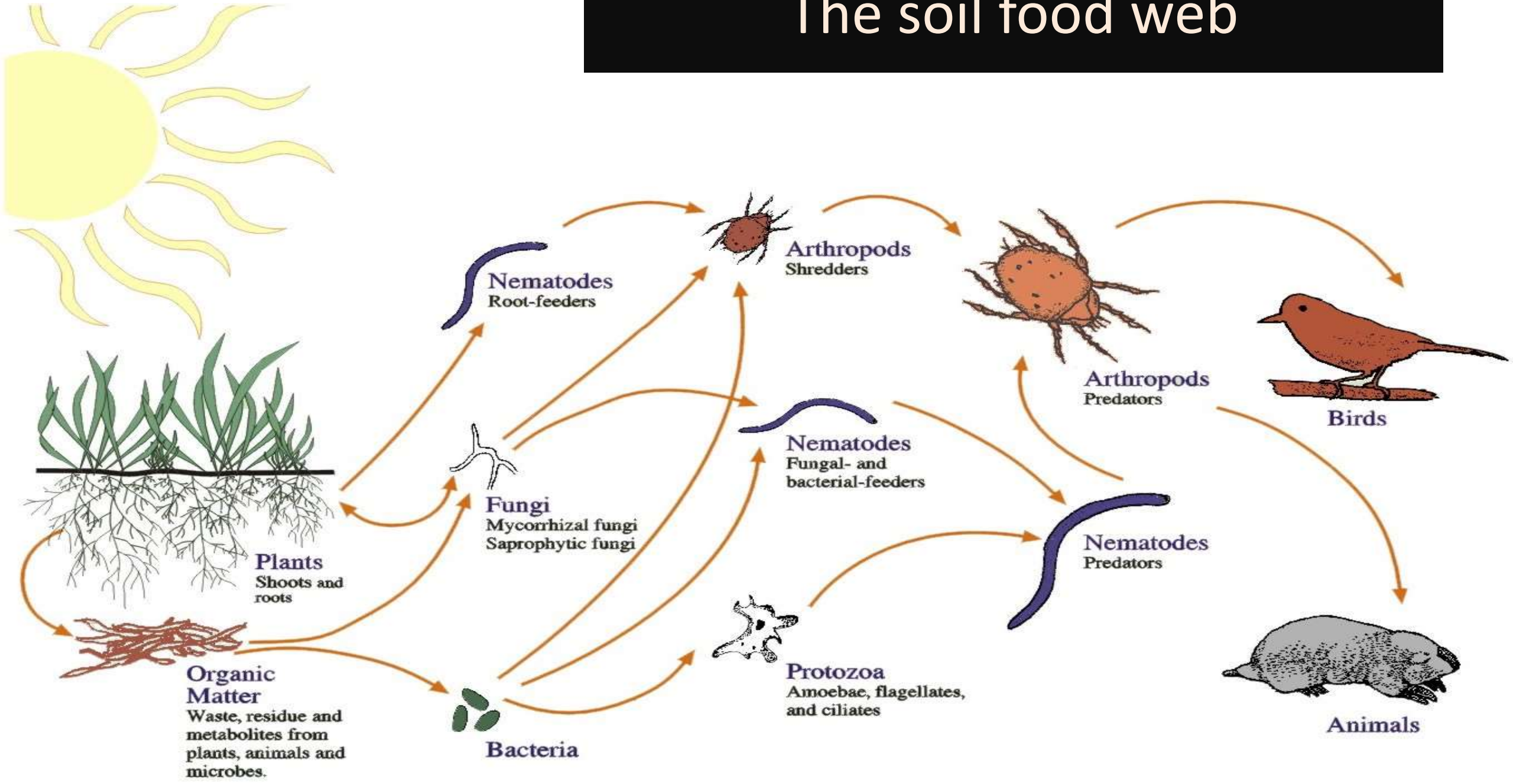
Sand, Silt, and Clay





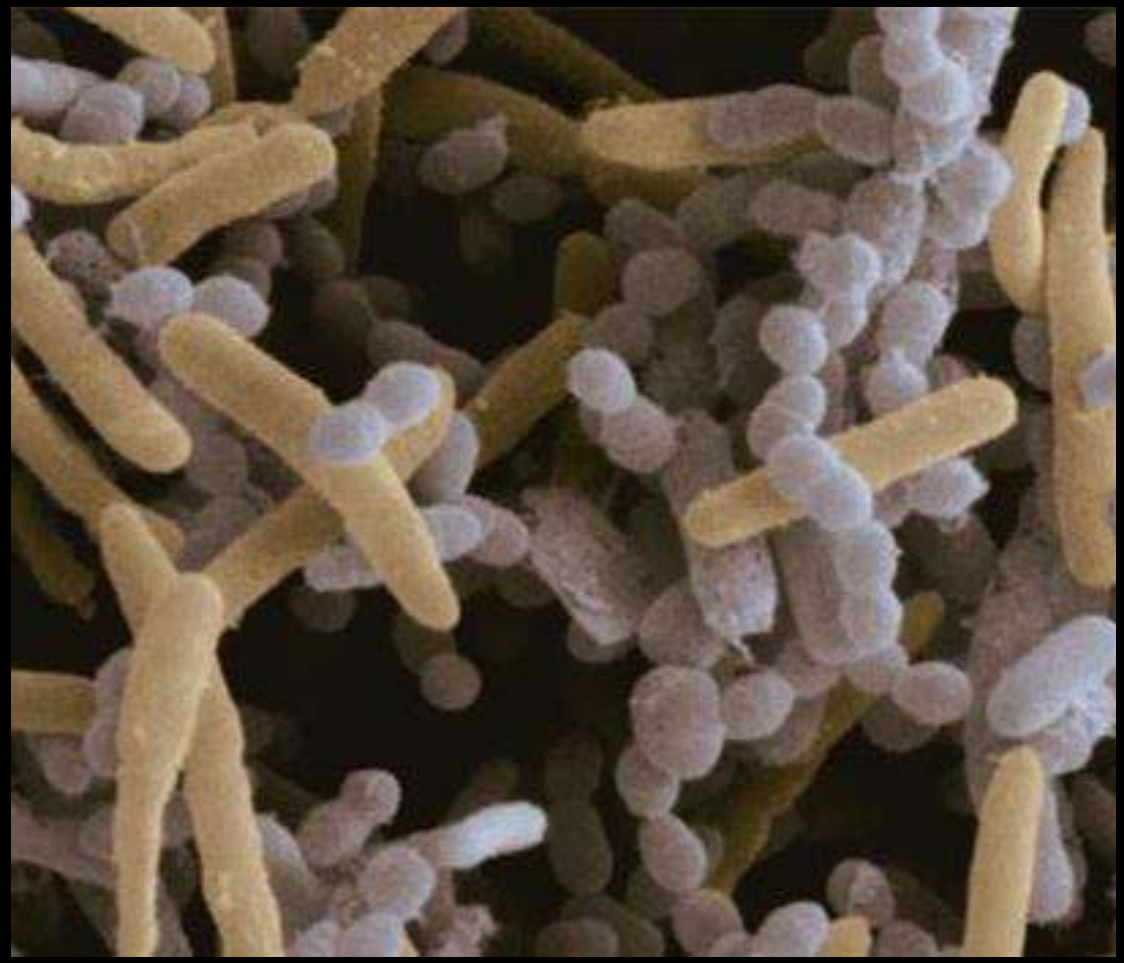

Soil organic matter
Active, decomposing : 35 %
Stable matter : 50 %
Living organisms : 15 %
Active, decomposing
Living organisms
Stable matter

The soil food web



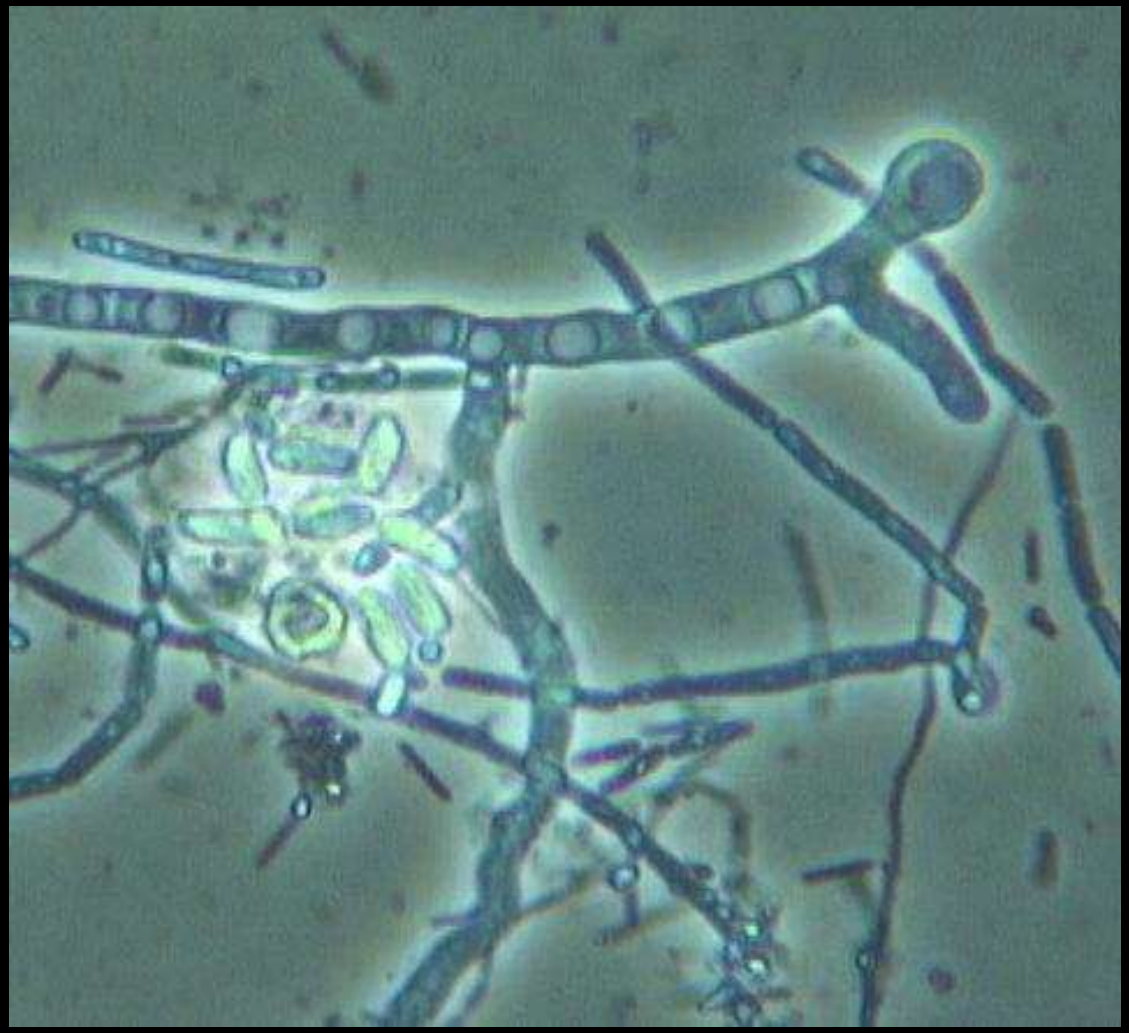
The soil food web

Bacteria



The soil food web

Fungi



The soil food web

Protozoa

The soil food web

Nematodes

The soil food web

Arthropods

The soil food web

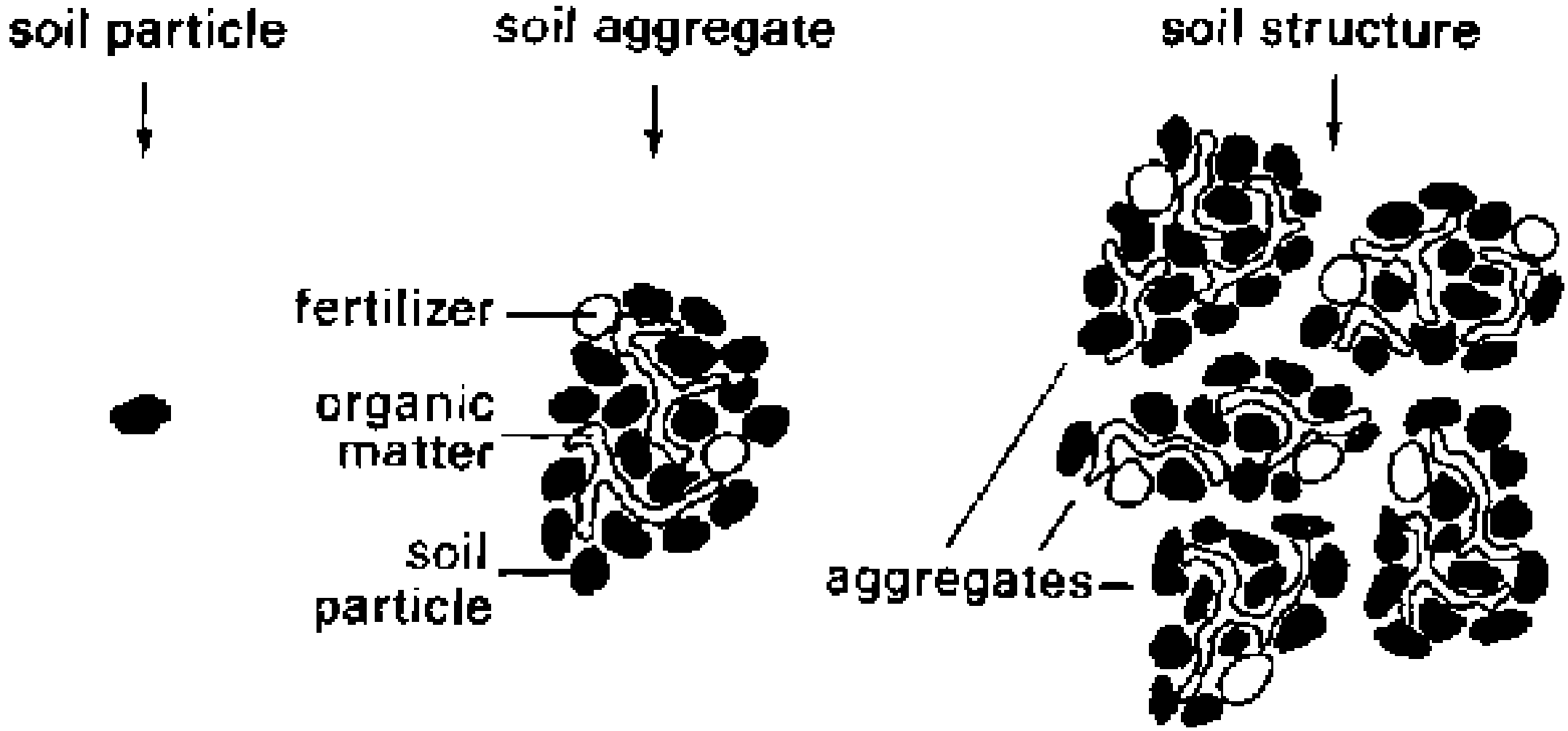
Earthworms

The soil food web

In a teaspoon of healthy soil, you will find:

- 100,000,000 – 1,000,000,000 bacteria
- Several yards of fungal filaments
- 10,000 – 1,000,000 protozoa
- 200 nematodes
- A few arthropods
- Maybe an earthworm

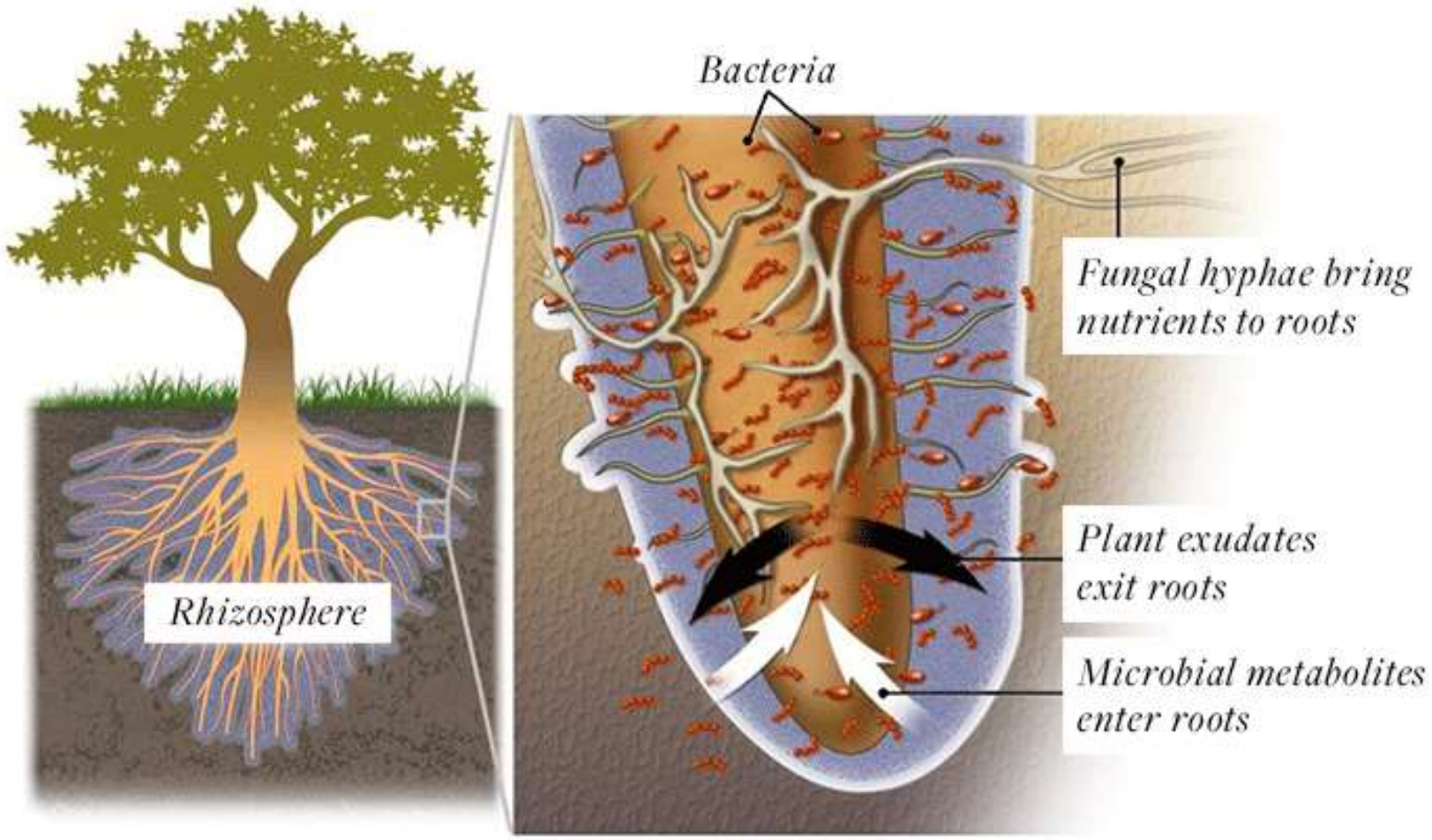
Soil structure and aggregate particles



Soil Video

- https://www.youtube.com/watch?v=cx_hmse9Se8

Symbiotic relationships:
The final piece of the soil puzzle



We can store carbon in the soil.

Story of Soil Video

- https://www.youtube.com/watch?v=K1NsqR6OX-k