Creating a **Soil Habitat** is the first step to managing soil biota for long-term soil quality, soil health, and productivity.

Soil biological processes are responsible for supplying approximately 75% of the plant available nitrogen and 65% of the available phosphorus in the soil. Like all organisms, those inhabiting your soil need food & a favorable environment. Adequate organic matter content, ample aeration, moderate moisture, neutral pH, and warm temperatures all favor increased microbial activity.

**Soil Health** what is it?
- The continued capacity of the soil to function as a vital living ecosystem that sustains plants, animals, and humans
  - Nutrient cycling
  - Water (infiltration & availability)
  - Filtering and Buffering
  - Physical Stability and Support
  - Habitat for Biodiversity

**Soil Health** is an attempt to bring together different aspects of the soil with the understanding that they are inter-related and that they must operate in synergy for optimum and sustainable functioning of the soil media.

**Rhizosphere**
- **Narrow region of soil directly around roots.**
- **Living roots release many types of organic materials.**
- **These compounds attract Bacteria that feed on the proteins & sugars.**

**What Do They Weigh?**
- **Bacteria**
  - 2,000 - 2,500 Lbs/Ac
  - 2,200 - 2,800 Kilograms/Hectare
- **Fungi**
  - 1,000 - 15,000 Lbs/Ac
  - 1,200 - 17,000 Kilograms/Hectare
- **Protozoa**
  - 20 - 300 Lbs/Ac
- **Nematodes**
  - 10 - 300 Lbs/Ac
  - 13 - 340 Kilograms/Hectare
- **Microbes in Humans**
  - 3 lbs/Person

Source:
- The Nature and Properties of Soils
  - Brady and Weil, Fourteenth Edition.
  - Soil Biology Primer.
  - National Geographic, Nathan Wolfe, January 2013.

The zone of greatest microbial activity usually occurs within the top couple of inches of the soil surface where optimal temperature, moisture, oxygen and nutrient conditions exist.