Optimal Biological Controls on Soil Organisms: Address Resource Concerns (SWAPAH+ E):

- Soil
- Water
- Air
- Plants
- Animals
- Human
- Energy

Optimal Soil Function:

- Nutrient Cycling
- Water (Infiltration & Availability)
- Physical Stability & Support
- Habitat for Biodiversity
- Access for Biodiversity (90% is mitigated by soil microbial activity)

Optimal Soil Properties:

- Biological
- Physical
- Chemical

Soil Health Principles:

- Max. Biodiversity
- Max. Living Roots
- Max. Cover
- Min. Disturbance
- Integrate Grazing (where applicable)

Restores:

- Rhizosphere
- Aggregatusphere
- Porosphere
- Detritusphere
- Drilosphere

Creates Optimal Biological Controls on Soil Organisms:

- Temperature
- Oxygen
- Food
- Moisture
- Nutrients
- Predation
- Competition
- Salinity & pH

How do we get there?

In - Field Soil Health Assessment (Baseline)

Soil Health Planning Considerations: Everything is Connected

Soil Health Journey:

- Field Demos/Trials
- Test Strips (i.e. to adjust SHMS)

Planning Process:

Step 1: Identify Problems
Step 2: Determine Objectives
Step 3: Inventory Resources
Step 4: Analyze Resource Data
Step 5: Formulate Alternatives
Step 6: Evaluate Alternatives
Step 7: Make Decisions
Step 8: Implement the Plan
Step 9: Evaluate the Plan

Innovation/Creativity/learn from Soil Health Champions

Feeding & Protect the Soil Food Web

Develop a Soil Health Mgt. System (SHMS): How do we get there?

In - Field Soil Health Assessment (Baseline)

Beginning with Ecological Perspective:

Mimic Nature (Synergy)

Soil Health Principles:

- Max. Biodiversity
- Max. Living Roots
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- Integrate Grazing (where applicable)

Restores:

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Increases in Available Water:

Increase in Available Water

27,154 gallons/acre - inch

GOAL: Build Soil Structure

Harvest the Sun’s Energy with diverse plants

“Everything is connected”

Increases yields & at lower inputs.

(Ref. Building Soils for Better Crops)

Ecology: the study of relationships between people, animals, and plants and their environment (interconnectedness).