

Management Practices to Improve Soil Health

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SOIL HEALTH:

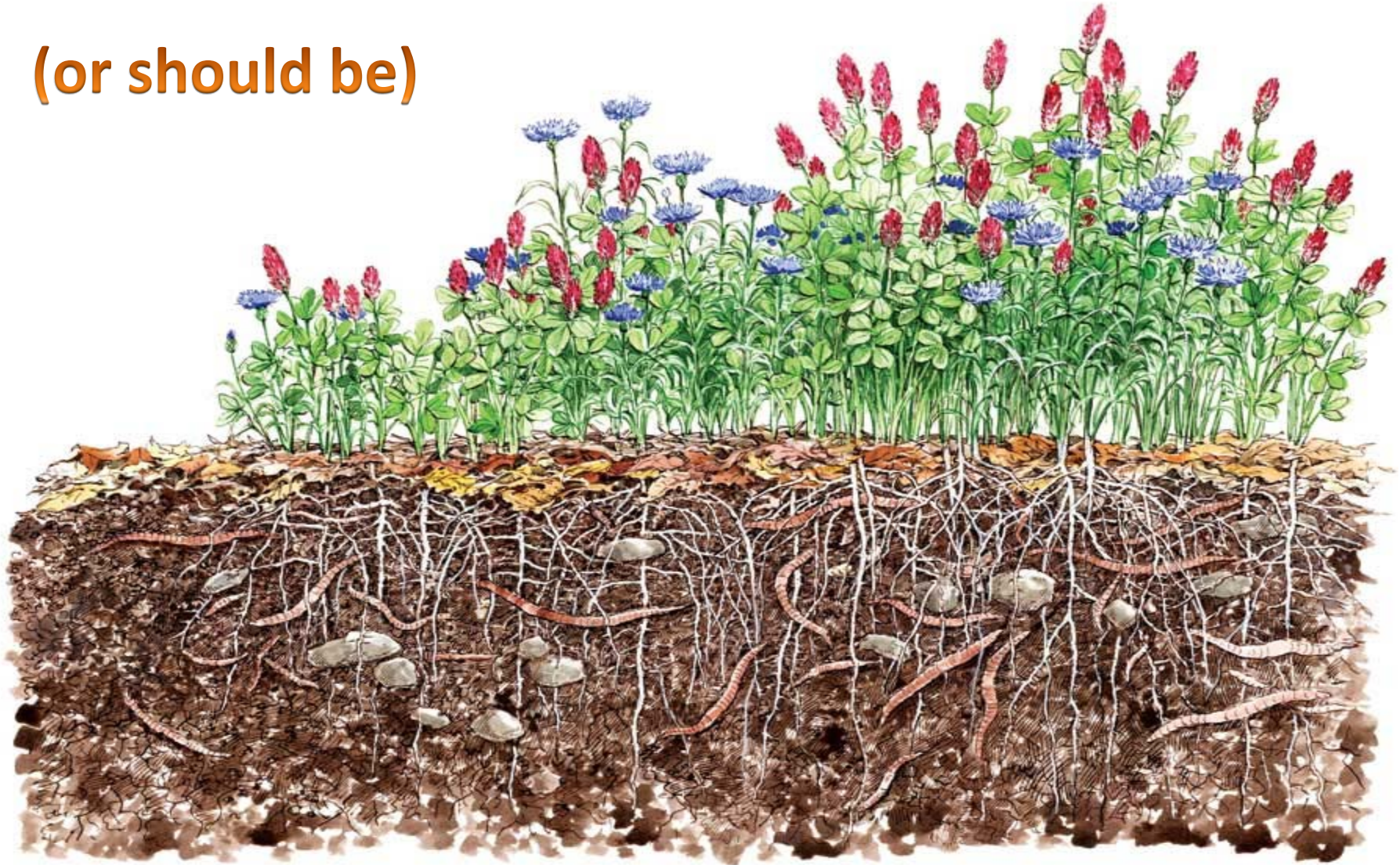
The continued capacity of the
soil to function as a

VITAL LIVING ECOSYSTEM

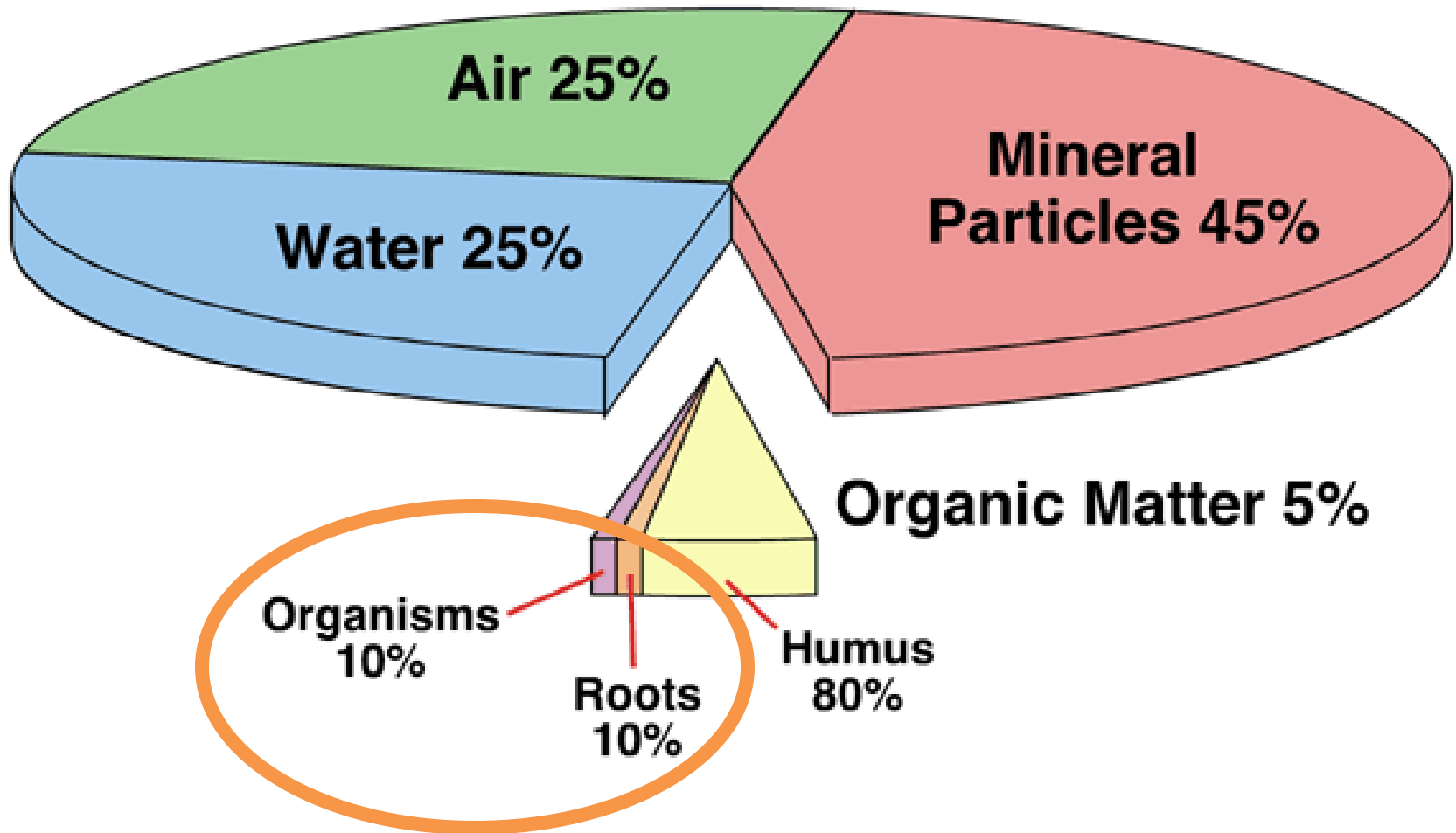
that sustains
plants, animals, and humans.

YOUR SOIL IS ALIVE!

(or should be)



POWER IN THE 1%



Four Principles to Improve Soil Health

1. Minimize Soil Disturbance
2. Keep the Soil Covered at all Times
3. Keep Living Roots in the Soil
4. Maximize Diversity



Four Principles to Improve Soil Health

1. Minimize Soil Disturbance

- Tillage is not your soil's friend
 - Breaks down soil structure
 - Increases soil respiration rates
 - Shifts soil biology to bacterial dominated
 - Reduces diversity
 - Eliminates living roots
 - Exposes the soil surface



Four Principles to Improve Soil Health

2. Keep the Soil Covered at all Times

- Residues
- Mulches
- Live Plants



Soils that are covered are:

- Cooler
- Conserve moisture
- Suppress weeds
- Feed the soil biology
- Support LIFE!



Four Principles to Improve Soil Health

3. Keep Living Roots in the Soil

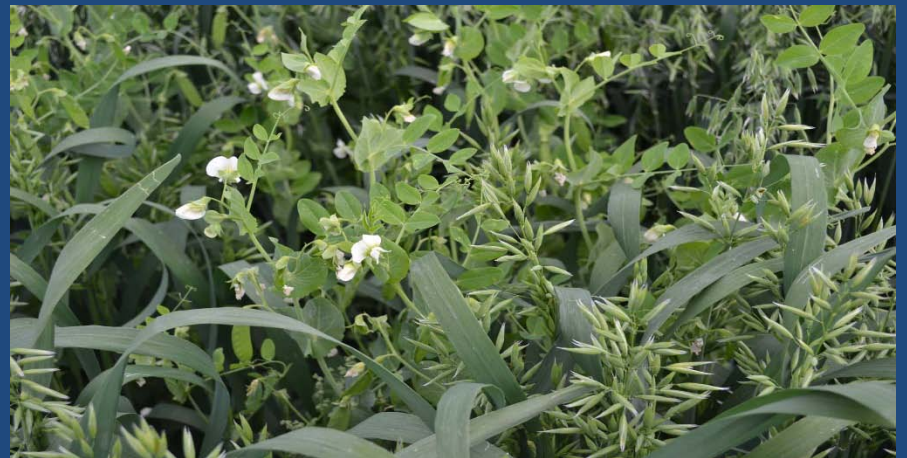
- Root exudates feed and stimulate soil biology
- Active Soil = Healthy Soil = LIVING soil



Four Principles to Improve Soil Health

4. Maximize Diversity

- Grass
- Broadleaf
- Legume



Soils Respond To Management



Benefits of Conservation Cover

- Living cover!
- Reduce soil erosion
- Moisture conservation
- Weed suppression
- Attract beneficial insects and pollinators
- Fix nitrogen
- Add Organic Matter!!



Bare Ground



Black Oats



Perennial Peanut



Mix of Black Oats, Vetch and Peas

Benefits of Residue Management

- Reduce soil erosion
- Moisture conservation
- Weed suppression
- Add Organic Matter!!
- Keep the soil covered
- Improve access into the field
- Feed the Biology!

Coffee Conservation Cover

Perennial Peanut



Coffee Conservation Cover



Black Oats

Coffee Conservation Cover

Mixture



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Questions?

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