



# 5A

## SOIL TECH NOTES

# What the Bugs Do

### **BENEFICIAL ORGANISMS:**

- Nutrient cycling – Organic N to Mineral N.
- Provide food sources for growing plants.
- Breakdown of organic residues in the surface layer.

### **DISEASE SUPPRESSION:**

- General – “good” microbe fills an ecological niche instead of a pathogen.
- Specific – “good” microbes secrete chemicals toxic to pathogens.

### **DEGRADATION OF POLLUTANTS:**

- Reduce organic pollutants in soil and water.
- Prime degrader of solvents, pesticides, petroleum products in the soil as well as methane and nitrous oxide.

### **IMPACTS ON ORGANIC MATTER:**

- Microbes break down residue material into smaller pieces.
- More smaller pieces hold nutrients more efficiently and help retain water.
- Microbes form aggregates and increases porosity with secretions and hyphae.
- Microbial burrowing and moving in the soil opens channels for roots.

