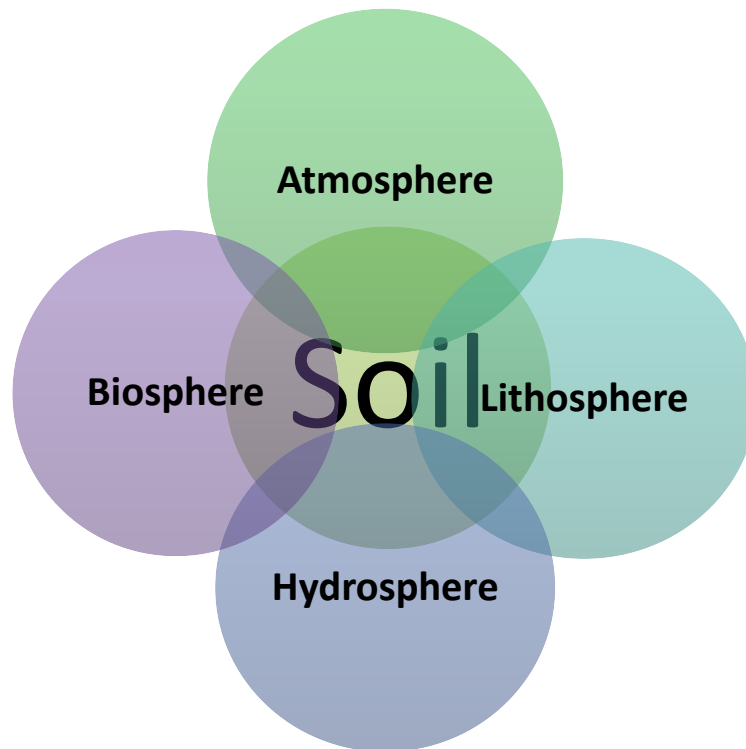


## Soil Chemistry Exam Notes

### ➤ What is soil?

- The unconsolidated mineral matter on the surface of the earth that has been subjected to and influenced by genetic and environmental factors and producing a product—soil—that differs from the material from which it is derived in many physical, chemical, biological and morphological properties.



### ➤ Texture

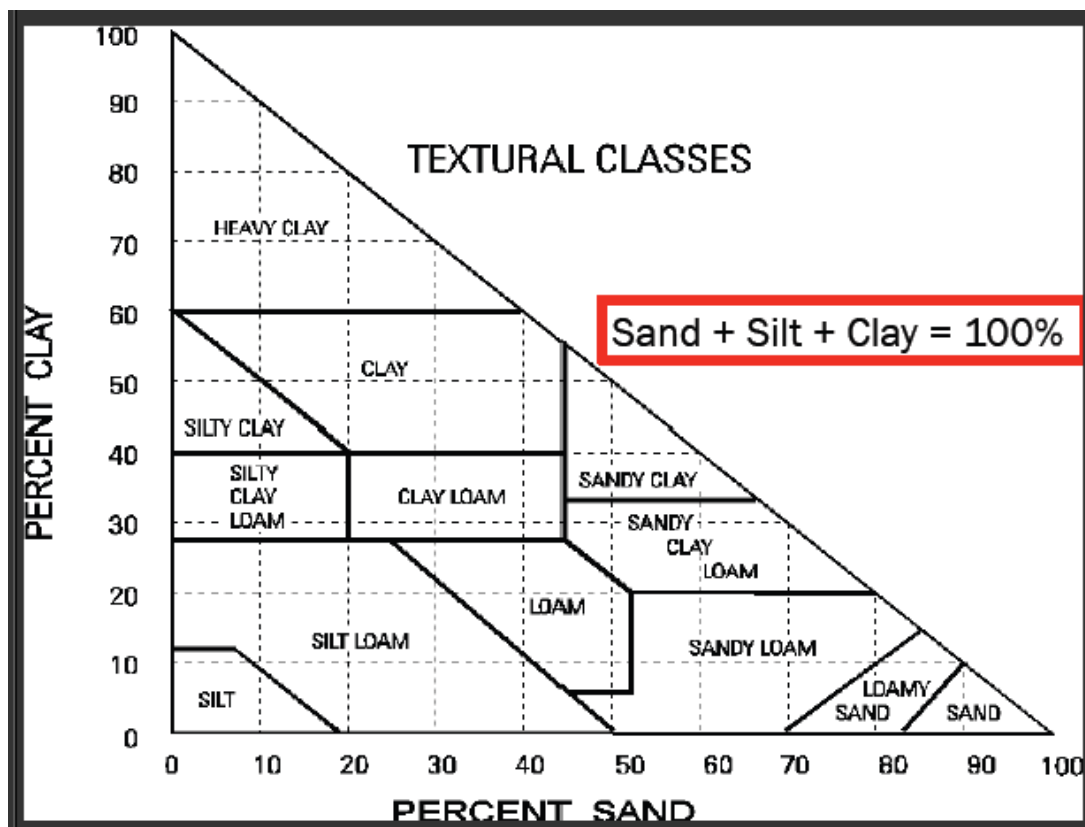
- Tells us something about the physical and chemical properties of the soil
  - Examples:
    - Clay soil will shrink and swell
    - Clay soil and cation exchange
    - Sandy soil won't hold water

### ➤ Coarse and Fine soil

- A coarse soil has a high percentage of sand
- Gritty feel
- A fine soil has a high percentage of clay
- Smooth feel

### ➤ Texture and physical properties

- How much pore space?  
Affects how much air and water the soil can hold.
- Arrangement of the particles  
Affects how well the soil packs.  
Implications for plant roots.



### ➤ Textural Classes

- $\text{SAND} + \text{SLIT} + \text{CLAY} = 100\%$
- Given an increase clay content of a soil, what happens to:
  1. Water – Increase
  2. Pore Size – Decrease
  3. Total pore space – Increase
  4. Bulk density – decrease