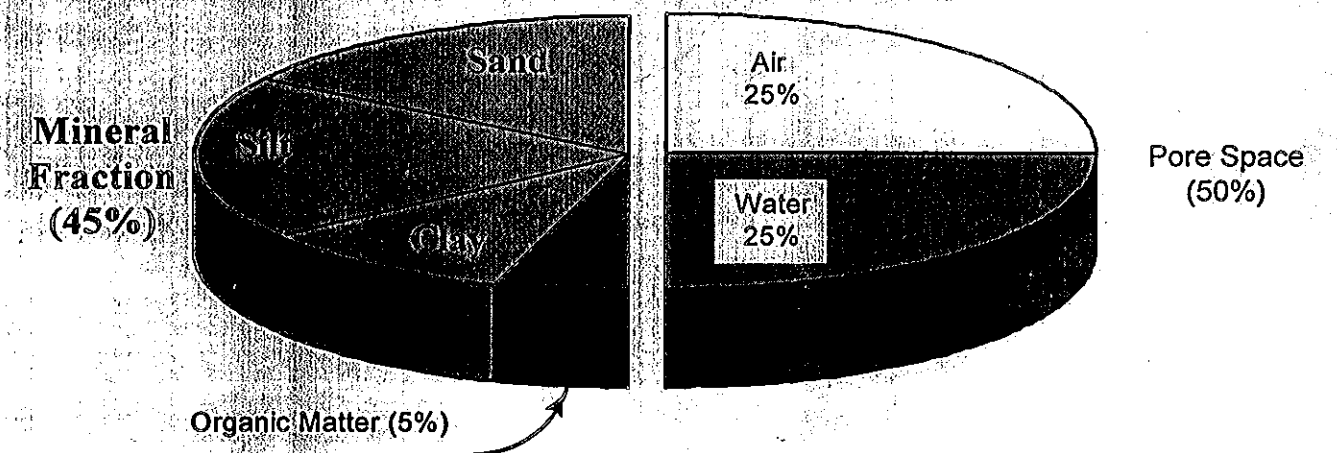


Soil Texture

- The mineral portion of the soil can be subdivided into 3 basic categories based on individual mineral particle sizes:
 - ◊ sand particles are the largest and can be seen with the naked eye
 - ◊ clay particles are the smallest and can be viewed only under a microscope
 - ◊ silt particles fall between sand and clay

Figure 2-1: Soils consist of approximately 50% voids and 50% solids. The solid portion consists of minerals and organic matter. The mineral portion is normally subdivided into sand, silt and clay components.



- Texture is determined by the percentage of sand, silt and clay in a soil (i.e., mineral fraction)
- Organic matter content does not influence textural classification even though organic matter has strong positive influence on soil quality and productivity.
- Each soil can be classified into one of 13 textural groups (see texture triangles).
- Clay soils contain primarily clay particles (very small particles).
- Silt soils have a high silt particle content (intermediate size particles).
- Sandy soils have a high percentage of sand (relatively large particles).
- A loam is a soil that does not exhibit the dominant physical properties of any of these three groups (e.g., soil with 25% clay, 35% silt, 40% sand).

Figure 2- 2: Illustration of the relative size of sand, silt and clay particles

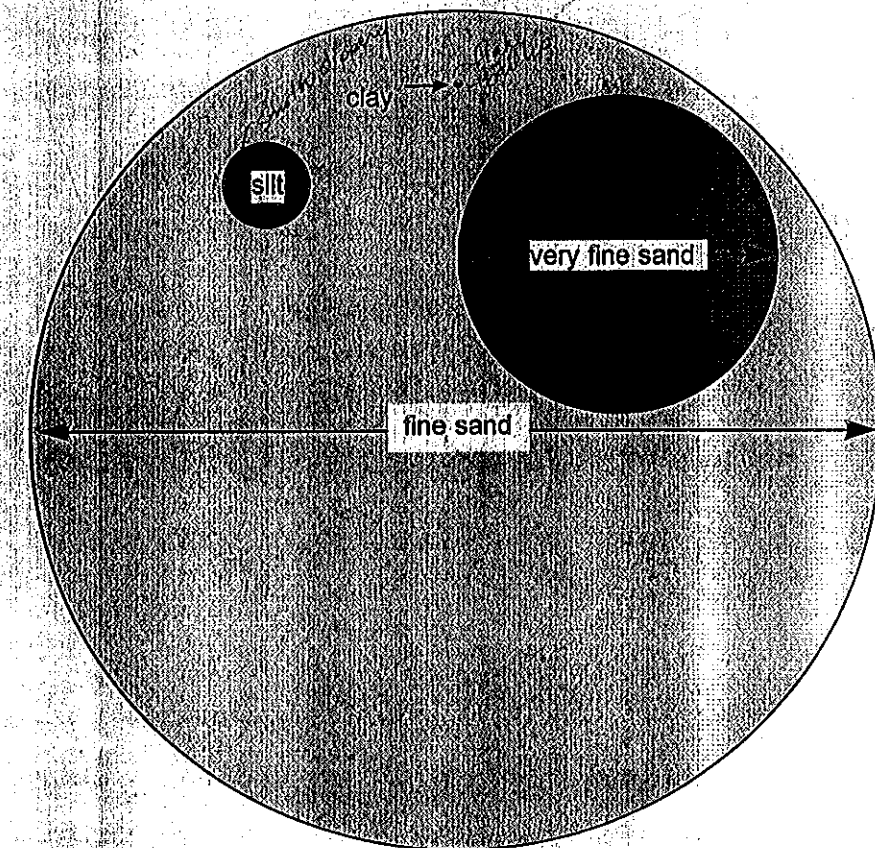


Table 2- 1: Size range of the various mineral components of soil texture

Textural Component	Size Range (mm)	Size Relative to Clay (X larger)
clay	less than 0.002	
silt	0.002 - 0.05	13 X
very fine sand	0.05 - 0.10	40 X
fine sand	0.1 - 0.25	90 X
medium sand	0.25 - 0.5	190 X
coarse sand	0.5 - 1.0	375 X
very coarse sand	1.0 - 2.0	750 X