



Estimating Soil Textures

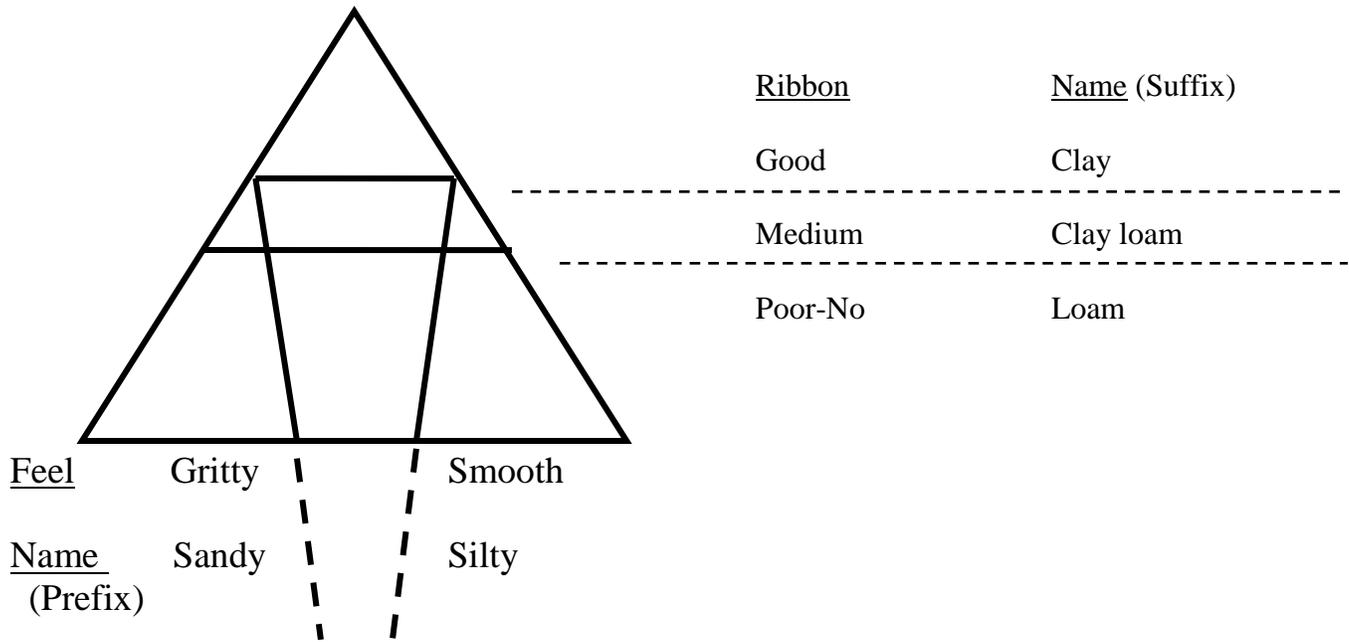
Soils can be classified by their texture or particle size distribution. Practically speaking, a soil particle must pass through a 2 mm sieve (no. 10, US) to be called a soil particle.

After the soil is air dried, the particles passing through the 2 mm sieve are either organic or inorganic. Texture is used only to describe the distribution of the inorganic fraction. The organic matter is either removed or disregarded in each sample when the texture is determined.

An estimation of texture can be made in the field by using the following method:

1. Place about a tablespoon of soil in the palm of your hand.
2. Mix it with water and form a moist ball. The soil is at the correct consistency when the ball does not leave soil on the palm of your hands when it is rolled around. (The consistency of modeling clay).
3. Press the moistened soil ball between the thumb and forefinger in an attempt to form a ribbon with the soil. As the thumb and forefinger are pressed together the soil will extrude forming the ribbon. The motion should be repeated several times to test the cohesiveness of the ribbon, attempting to form a continuous ribbon.
4. Ribbons can be classed into three broad categories:
 - a. Good Ribbon - The ribbon does not break and has very little cracking along the sides.
 - b. Medium Ribbon - The sides of the ribbon crack deeply and eventually the ribbon will break and fall off.
 - c. Poor Ribbon - No ribbon formed (no cohesiveness) or the ribbon breaks with the first applied pressure and does not cohere.
5. The sample is then further wetted and mashed between the thumb and forefinger. This is to determine the amount of grittiness or smoothness. The soil should be wet enough to feel individual particles. If the soil feels like sand, then it is called “gritty”. If it feels like flour, then it is called “smooth”. There is a category between the two that is both gritty and smooth but no descriptive term is used.

6. The texture is determined by using the following modified soil triangle:



7. Examples:
- a) The soil had a medium ribbon and felt smooth and gritty.
Texture = clay loam
 - b) The soil had a poor ribbon and felt gritty.
Texture = sandy loam

8. One exception – instead of silty loam, it is called silt loam.

Remember that this is just an estimation of the particle size distribution. There are precise laboratory methods designed to accurately determine the texture.

Your County Agent can suggest a commercial laboratory for you to have your soil analyzed.