




# Soil Texture

The way a soil "feels" is called the soil texture. Soil texture depends on the amount of each size of particle in the soil.

**Sand**, **silt**, and **clay** are names that describe the size of individual particles in the soil.

- **Sand** are the largest particles and they feel "gritty."
- **Silt** are medium sized, and they feel soft, silky or "floury."
- **Clay** are the smallest sized particles, and they feel "sticky" and they are hard to squeeze.

<b>Barrel</b>	<b>Plate</b>	<b>Coin</b>
 <p><b>Sand</b> feels gritty</p> <p>(2.00 - 0.05 mm, USDA) (2.00 - 0.02 mm, ISSS)</p>	 <p><b>Silt</b> feels floury</p> <p>(0.05 - 0.002 mm, USDA) (0.02 - 0.002 mm, ISSS)</p>	 <p><b>Clay</b> feels sticky</p> <p>(&lt; 0.002 mm, USDA) (&lt; 0.002 mm, ISSS)</p>

**Step 1** (Get and moisten sample)

Place some soil from a horizon (about the size of a small egg) in your hand, and, using the spray mist bottle, moisten the soil. Let the water soak in and then work the soil between your fingers until it is the same moisture throughout. Once the soil is moist, try to form a ball. If the soil forms a ball, go on to Step 2. If the soil does not form a ball, go to Step 5.

<p><b>Step 2</b> (Test for Clay)</p> <p><b>A.</b> If the soil:</p> <ul style="list-style-type: none"> <li>○ Is really sticky</li> <li>○ Hard to squeeze</li> <li>○ Stains your hands</li> <li>○ Has a shine when rubbed</li> <li>○ Forms a long ribbon (5+ cm) without breaking,</li> </ul> <p>Call it a clay and go to Step 3. <b>Otherwise</b>, go to <b>B.</b></p>	
<p><b>B.</b> If the soil:</p> <ul style="list-style-type: none"> <li>○ Is somewhat sticky</li> <li>○ Is somewhat hard to squeeze</li> <li>○ Forms a medium ribbon (between 2-5 cm)</li> </ul> <p>Call it a clay loam and go to Step 3. <b>Otherwise</b>, go to <b>C.</b></p>	
<p><b>C.</b> If the soil is:</p> <ul style="list-style-type: none"> <li>○ Soft</li> <li>○ Smooth</li> <li>○ Easy to squeeze,</li> <li>○ At most slightly sticky,</li> <li>○ Forms a short ribbon (less than 2 cm)</li> </ul> <p>Call it a loam and go to Step 3. <b>Otherwise</b>, go to <b>D.</b></p>	
<p><b>D.</b> If the soil forms a ball but no ribbon, go to Step 4.</p>	

**Step 3** (Refine initial soil texture classification from Step 2 for relative amounts of sand and silt) Wet a small pinch of the soil in your palm and rub it with a forefinger. If the soil:

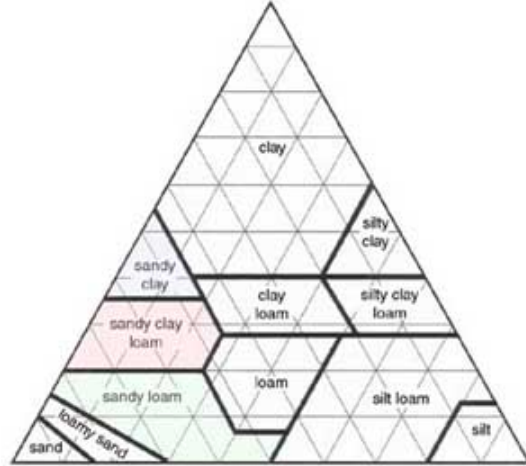
- Feels very gritty, go to E
- Feels very smooth, with no gritty feeling, go to F
- Feels only a little gritty, go to G

**E.** Add the word sandy to the initial classification.

Soil texture is (check one):

- sandy clay,
- sandy clay loam,
- sandy loam

**Soil Texture is complete.**



**F.** Add the word silty or silty to the initial classification.

Soil texture is (check one):

- silty clay,
- silty clay loam,
- silt loam

**Soil Texture is complete.**



**G.** Leave the original classification of (check one):

- clay,
- clay loam,
- loam

**Soil Texture is complete.**



**Step 4** (Test for loamy sand or silt) If the soil:

- Forms a ball
- Forms no ribbon
- And is

**H.** Very gritty, Soil texture is: loamy sand  
**Soil Texture is complete.**

*Or*

**I.** Very soft and smooth with no gritty feeling, Soil texture is: silt  
**Soil Texture is complete.**



**Step 5** (Test for sand) If the soil:  
Forms no ball and falls apart in your hand,  
Soil texture is: Sand  
**Soil Texture is complete.**

