

Identifying Soil Texture by Measurement

1. Spread soil on a newspaper to dry. Remove all rocks, trash, roots, etc. Crush lumps and clods.
2. Finely pulverize the soil.
3. Fill a tall, slender jar (like a quart jar) one-quarter full of soil.
4. Add water until the jar is three-quarters full.
5. Add a teaspoon of powdered, non-foaming dishwasher detergent.
6. Put on a tight fitting lid and shake hard for 10 to 15 minutes. This shaking breaks apart the soil aggregates and separates the soil into individual mineral particles.
7. Set the jar where it will not be disturbed for 2 to 3 days.
8. Soil particles will settle out according to size. **After 1 minute** (since shaking the jar), mark on the jar the depth of the sand.
9. **After 2 hours**, mark on the jar the depth of the silt.
10. **When the water clears**, mark on the jar the clay level. This typically takes 1 to 3 days, but with some soils it may take weeks.
11. Measure the thickness of the sand, silt, and clay layers.

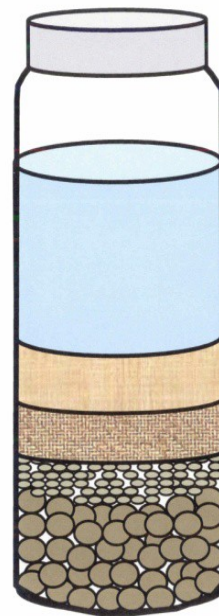
- a. Thickness of sand deposit _____
- b. Thickness of silt deposit _____
- c. Thickness of clay deposit _____
- d. Thickness of total deposit _____

12. Calculate the percentage of sand, silt, and clay.

[clay thickness]/[total thickness] = ___ percent clay

[silt thickness]/[total thickness] = ___ percent silt

[sand thickness]/[total thickness] = ___ percent sand

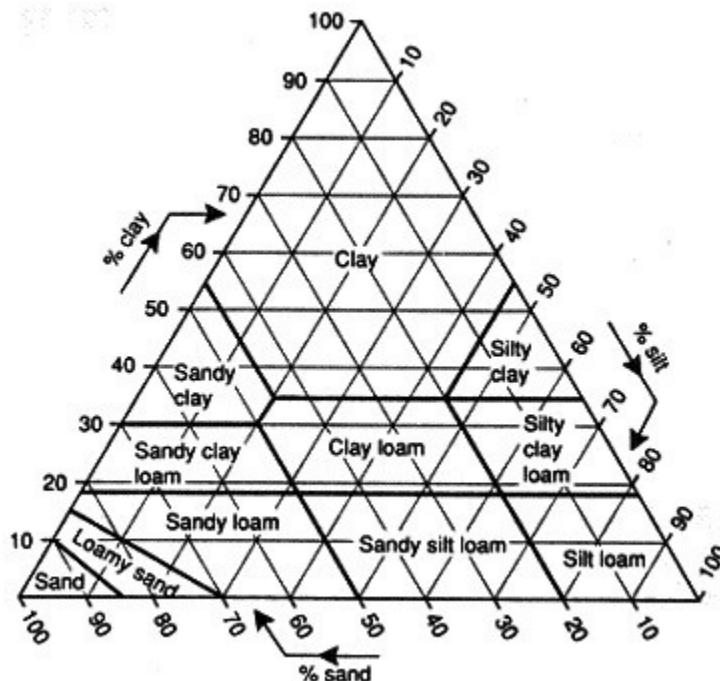


Clay layer – water clears

Silt layer – 2 hours

Sand layers – 1 minute

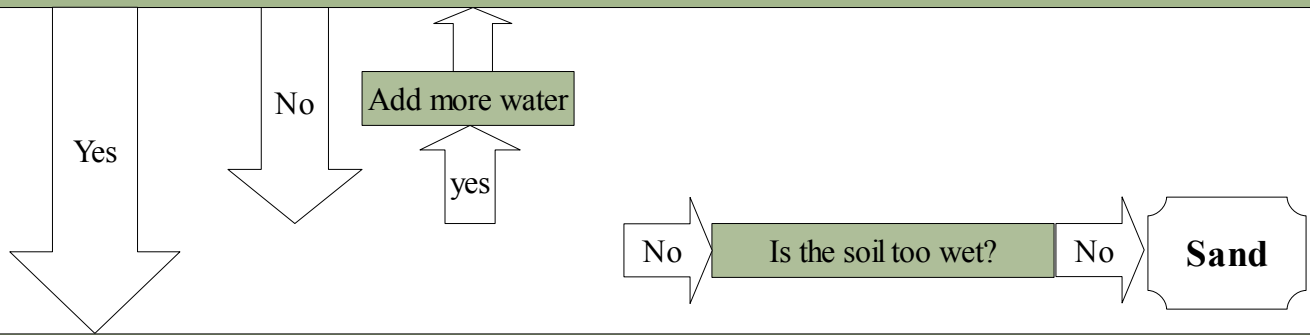
13. Turn to the soil texture triangle and look up the soil texture class.



SOIL TEXTURE BY FEEL

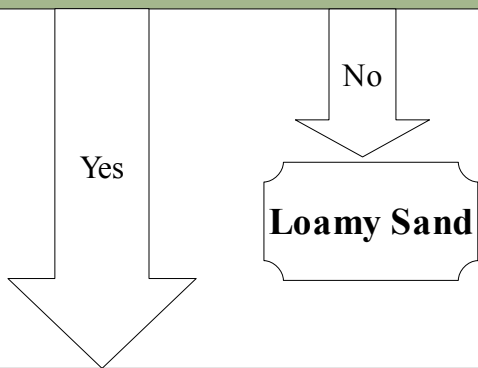
Start: Place soil in palm of hand. Add water drop-wise and knead the soil into a smooth and plastic consistency, like moist putty.

Does the soil remain in a ball when squeezed?



Place ball of soil in the hand, gently pushing the soil out between the thumb and forefinger, squeezing it upward into a ribbon. Form a ribbon of uniform thickness and width. Allow ribbon to emerge and extend over the forefinger, breaking from its own weight.

Does the soil form a ribbon?



What kind of ribbon does it form?

Moisten a pinch of soil in palm and rub with forefinger	What kind of ribbon does it form?		
	Forms a weak ribbon less than 1" before Breaking	Forms a ribbon 1-2" before Breaking	Forms a ribbon 2" or longer before breaking
	LOAM	CLAY LOAM	CLAY
Does it feel very gritty?	Sandy Loam	Sandy Clay Loam	Sandy Clay
Does it feel equally gritty and smooth?	Loam	Clay Loam	Clay
Does it feel very smooth?	Silt Loam	Silty Clay Loam	Silty Clay