

Project 2.1.7 Lab Report Template

Problem

What is top soil and subsoil compromised of and how can it be analyzed? The soil properties being researched are sand, silt and clay. Sand has a round shape and feels gritty; it attributes to porosity and reduces water holding capacity. Silt has a round shape and is very small to detect; good for porosity. Clay is sticky when wet and is bad for porosity; holds water in soil. There are three properties when talking about soil. Permeability how quickly water moves through soil. Porosity is a combination of texture structure and organic matter. Water holding capacity, is how much water can be contained. The properties and soil can be determined by the structure and grade of the soil. There are two types of structures when classifying, structure type and structure grade. Structure type is the shape of the ped and the structure grade is the strength of the ped. We will expect to find most of the three soil types and will be able to identify them using the three properties of soil and the two structure types.

Hypothesis

I predict that the soil will have a strong permeability rate, soil to feel smooth and sticky and the color of both soils most brown and blacks. I also predict that the top soil will be dry and the subsoil will be moist or wet due to it being further under the ground.

Materials

- Project 2.1.7 Lab Report Template
- Project 2.1.7 Soil Evaluation Card
- Project 2.1.7 Evaluation Rubric
- Pencil
- Computer with spreadsheet software
- Agriscience Notebook
- Soil Pit

Procedures

1. Observe Soil Pit
2. Touch The Soil
3. Examine Top Soil
4. Examine Subsoil

<p>First Horizon (__5_ to __6_ inches)</p> <p>Color __4__</p> <p>Texture __4__</p> <p>Coarse Fragments __3__</p> <p>Structure Type __4__</p> <p>Structure Grade __4__</p> <p>Horizon Name __AB__</p>	<p>First Horizon (__0_ to __8_ inches)</p> <p>Color</p> <p>__2__ Texture</p> <p>Coarse Fragments</p> <p>Structure Type</p> <p>Structure Grade</p> <p>__2__ Horizon Name</p>	<p>The differences that are apparent to my findings would be close to similar but not exact because I have a different opinion. The differences are between the texture, structure grade and horizon name.</p>
<p>Second Horizon (__3_ to __4_ inches)</p> <p>Color __4__</p> <p>Texture __5__</p> <p>Coarse Fragments __2__</p> <p>Structure Type __1__</p> <p>Structure Grade __1__</p> <p>Horizon Name __AB__</p>	<p>Second Horizon (__28_ to __34_ inches)</p> <p>Color</p> <p>__5__ Texture</p> <p>Coarse Fragments</p> <p>Structure Type</p> <p>Structure Grade</p> <p>__AB__ Horizon Name</p>	<p>This soil was close to the same with my findings all except the inches. The reasoning for that could most likely be caused because this sample soil had more define characteristics than the other soil sample.</p>
<p>Third Horizon (__ to __ inches)</p> <p>Color</p> <p>Texture</p> <p>Coarse Fragments</p> <p>Structure Type</p> <p>Structure Grade</p> <p>Horizon Name</p>	<p>Third Horizon (__ to __ inches)</p> <p>Color</p> <p>Texture</p> <p>Coarse Fragments</p> <p>Structure Type</p> <p>Structure Grade</p> <p>Horizon Name</p>	

Fourth Horizon (___ to ___ inches)	Fourth Horizon (___ to ___ inches)	
Color _____	_____ Color	
Texture _____	_____ Texture	
Coarse Fragments _____	_____ Coarse Fragments	
Structure Type _____	_____ Structure Type	
Structure Grade _____	_____ Structure Grade	
Horizon Name _____	_____ Horizon Name	

Analysis of Results

This lab had helped me better understand the differences between and top soil and subsoil. Throughout this lab it was apparent that there was things similar and things different to each sample of soil. The top soil was more of a sand clay texture and the subsoil was more of a sticky smooth feeling which was apparent the clay. I figured for the most part both soil sample would be dry but then were not they were mostly always wet. This project has helped me better understand the difference and similarities that can appear between Top soil and Subsoil.

Conclusions

Through the result I can infer that most subsoil has clay in the soil and the top soil is mostly made out of sand. My hypothesis was mostly correct, I said that I thought the subsoil was going to wet or moist and it turned out to be wet. I was wrong when I said that the top soil was going to be dry because when I observed the soil is was also wet. I also was correct when I said the soil permeability rate was going to be strong. My prediction of the color of the soil was half and half because I said that it would be browns and blacks and it turned out to be dark greyish colors. Over all I think this project helped me better understand the similarities and differences between the Top sol and sub soil.