

Soil Type	Amount of H2O	Moisture Meter Reading
Norfolk	55ml	39.9
Goldsboro	45ml	41.3
Lynchburg	80ml	41.1

The rate of infiltration compared to soil moisture in three soil types from Bertie County

By Bertie Students



Introduction/Rationale

The purpose of this project is to find the infiltration rate of three different soil types found in Bertie County. We chose this experiment because Bertie County has a history of flooding during heavy rains. We wanted to know what type of soil would absorb the most moisture to help people understand why their yards may flood when it rains.

Research Problem

How does the moisture level compare to the rate of infiltration in several soil types found in Bertie County?

Hypothesis

We believed that the Norfolk soil would allow the most water to pass through easily. We thought that Lynchburg soil would absorb water the least because the soil was very difficult to dig out and feels more like clay.



Materials and Methods

This experiment used some specialized equipment including the following:

1. Soil moisture meter
2. LabQuest Stream interface
3. Samsung Tablet
4. Tap Water
5. Cups
6. Rubber bands

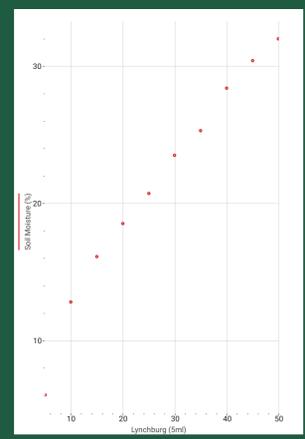
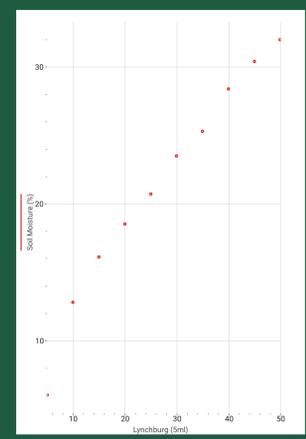
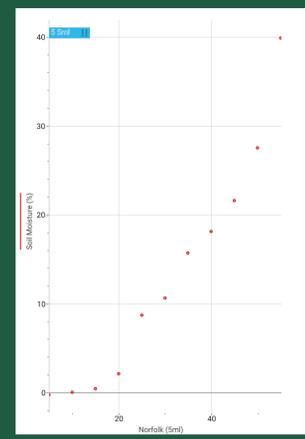
We used plastic bottles, mesh screening, pantyhose for filtering, a graduated cylinder, and a 4-beam balance. We collect three soil types from Lewiston Peanut Agricultural Peanut Research land including Norfolk type, Goldsboro type, and Lynchburg type.

To conduct this experiment, we needed to first create out bottles and fill them with 150 grams of soil. The soil moisture meter was placed into the soil, and connected to the LabQuest Stream interface, which collected our data on the tablet. We poured water into each type of soil at 5 mL increments until the soil was oversaturated and began to leak. We ran this experiment with our 3 different soils a couple of times to ensure our results were accurate.



Results

Soil Type	Amount of H2O	Moisture Meter Reading
Norfolk	55ml	39.9
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Discussion of Results

We found out that Lynchburg held the most water because it contains a little bit of clay. The soil with the least amount of water held was the Goldsboro soil because it has very little clay and is mostly sand. We came to the conclusion that the more clay that it has means that it will be able to hold the most water.

Conclusion

Our hypothesis was correct because the Lynchburg soil actually did hold the most water.

References and Acknowledgements

References
Soil Survey Bertie County North Carolina
By: United states Department of Agriculture Soil Conservation Service.

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