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Soil bulk Density and Moisture Content

We went into the field with the objective to collect soil samples and afterwards examine them in the soil laboratory. The slide hammer was the tool of choice in the collection of data. Each soil sample was put into a plastic bag and labeled with its correct ground depth from which it came from. (Figure 1 and Figure 2)



Figure 1

Doug demonstrates the proper procedure for using the slide hammer. Steve stands ready with the bag waiting for the sample.



Figure 2

The soil sediment being scooped into the bag.

Samples were taken in increments of 7 centimeters. The groups took ten samples if possible; some groups could not collect all the data because the sediment in their last sample was rock. An important part of the collection of data was not to pack the soil sample too tight or too loose. Marks were made on the slide hammer with a pencil in increments of 7 centimeters to determine that it was not being pushed in too far and packing the soil too tight, (Figure 3)



Figure 3

Steve and Doug using a ruler to mark 7 centimeter increments before extracting the soil samples.

After the samples were collected, they were placed into aluminum tins and their wet weight was taken before being put into the oven. The samples dried out for three days before any further analysis. Soil Bulk Density was then determined after their dry weight was established, and moisture content as well. It proved to be that there was no relationship between moisture content and bulk density as depth increased. Results for our group, Figure 4.

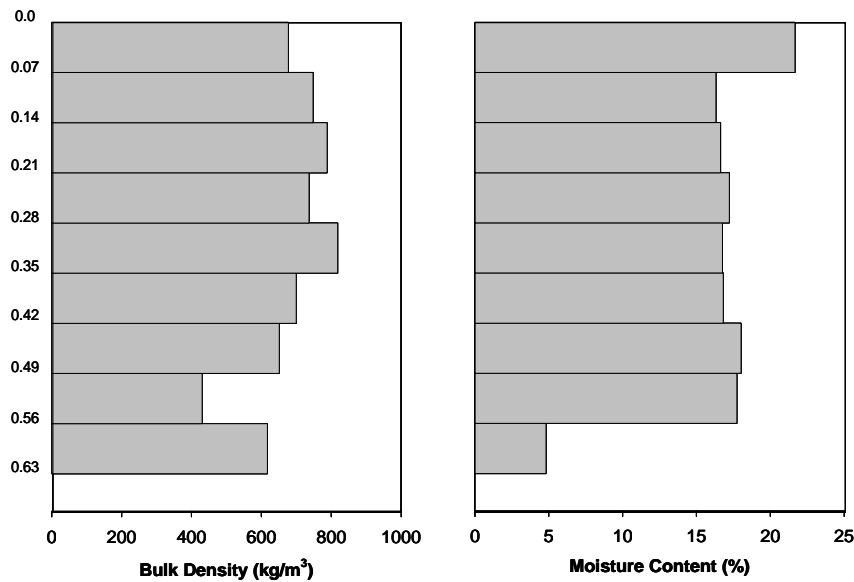


Figure 4

Bulk density and Moisture Content in relationship to depth below the ground.