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Experiment No-1: Identification of physical problems of soils

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Theory:

Acid soil

Poor yields of more sensitive crops may indicate acidic soil problems. Soil sampling and analysis are the first steps to correctly diagnose and confirm a soil acidity problem. Fields of concern must be carefully soil sampled.. Fields should be divided into areas based on soil type, topography and differences in crop growth. Each area must be sampled separately. Often, soil pH will vary with topography; so on land with more rolling topography, the lower, mid and upper slope areas should be sampled separately.

Collected sample using spade and shovel.

Dig 15 cm of soil and collect it labeled container.

Uniquely different areas of a field should be sampled separately



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Saline soil

Visual symptoms can be used to identify these problems, but ultimately a soil test is the best way for an accurate diagnosis. When salinity is suspected from a high water table, you may be able to measure groundwater depth by boring holes with an auger. If free water collects in holes less than 4 to 5 feet deep, a drainage problem is indicated. Plants growing in saline soils may appear water stressed. This is because the high salt content of the soil hampers the ability of plants to take up water from the soil. Plants growing in these soils sometimes give clues about the problem.

Collect a soil sample from the top 15 to 30 cm of soil, Concentrating on the areas that appear most impacted. High pH, salt or sodium levels are rarely uniformly distributed across fields.

Area of the field suspected of these problems should be mapped and sampled separately to fully understand the severity of the problem.



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Observation: Students must follow physical characteristics of soil in field itself and identify different kind of problem soil. The observed result write below.

Sample No	Remark
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2.	
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4.	
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Signature of Faculty In-charge