## Soil sampling:

Soil sampling is the process of extracting a small volume of soil for subsequent analysis at a lab.

### The objectives of soil sampling and analyzing:

Soil samples may be sent to specialized laboratories to determine….

- Load-bearing or drainage capabilities.
- Contamination by chemicals.
- Insect and disease presence.
- Determine the minerals and organic matter status of the soil.
- Classify the soil.
- Determine the effect of (eco system) factors on soil development.
- To obtain information about a field and use that information to make management decisions.

### Classical Equipment's of soil sampling:-

1-Auger 2- Core 3-Shovel 4-Spade

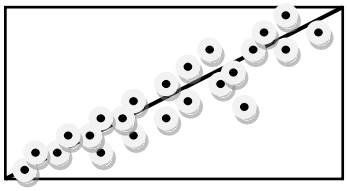
### Points were taken into consideration of sampling:

1. Uniformity of samples in weight or volume of each layer and in the same time….
2. Must be avoiding samples from.

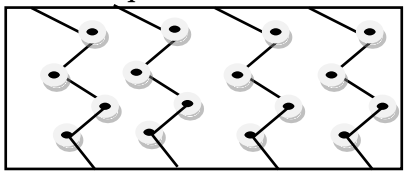
- Wet or irrigated soils.
- Nearby roads in to the field.
- Nearby the plant roots (rhizosphere).
- The storage of fertilizer in the field.
- Top of hills or valise.

## Methods of the soil sampling;

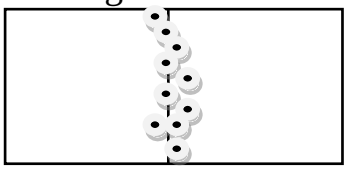
Random



Square method



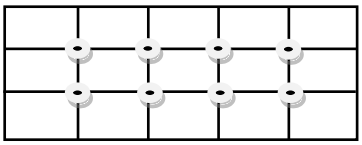
Rectangular

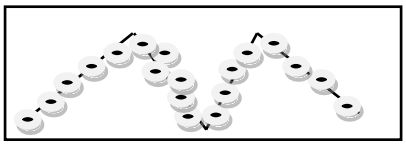


Diagonal line

Zigzag method

Cross line





Grid system method

M-W letter method

**Collecting the information about the representative point:**

1. Date
2. Place (location)
3. Area of region
4. Depth
5. Geographic Coordinate by (GPS)

**Preparing of Soil Samples for laboratory analysis:**

After the sample reaches in the laboratory or processing room it has to be dried, ground and sieved.

***a. Drying:***

Samples are generally air-dried (25-35$^{o}$C) and

Stored. Results of soil analysis are expressed on oven dry basis.

***b. Grinding:***

A roller, rubber pestle in an agate mortar or a motorized grinder is Commonly employed. Crushing of the gravel and primary sand particles Should be avoided. For heavy soils, it is better to pass these through a 2 mm sieve before allowing them to get completely air dried.

***c. Sieving:***

Field moist samples prior to drying can be made to pass through a 6 mm sieve by rubbing with fingers. This practice seems of much advantage in case of heavy soils. Soils in the right moisture condition can even be passed through a 2 mm sieve.

***d. Mixing:***

Sample should be thoroughly mixed by rolling procedure. Place the dried, ground and sieved sample on a piece of a cloth. Grasp the opposite corners and then holding one corner down pull the other corner across the sample. This process should be repeated back in the reverse direction.

***e. Storing:***

Store the soil in paper cartons (Soil sample box) using a polythene bag as an inner lining. Label the carton properly giving cultivators or experimenter's name, plot number, date of sampling and initials