



agriculture, environmental affairs,
rural development and land reform

Department:
agriculture, environmental affairs,
rural development and land reform .
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

Information

On

Soil Sampling

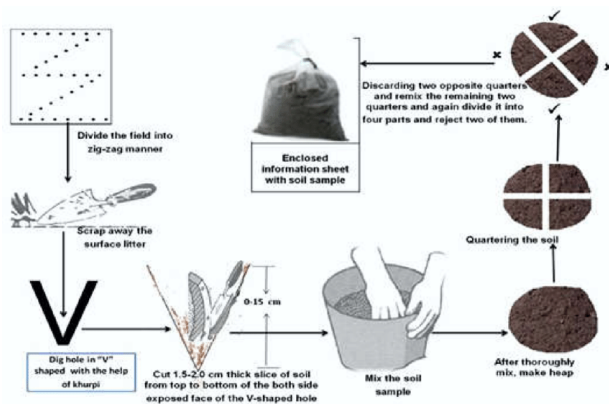


Soil testing and sampling

Soil testing is an essential component of soil resource management. Each sample collected must be a true representative of the area being sampled.

Soil sampling is the process of extracting a small volume of soil for subsequent analysis at a lab. Utility of the results obtained from the laboratory analysis depends on the sampling precision. Hence, collection of large number of samples is advisable so that sample of desired size can be obtained by sub-sampling.

The diagram below serves as an indication on how a soil sample should be taken.



Points to be considered

- Collect the soil sample during fallow period.
- In the standing crop, collect samples between rows.
- Sampling at several location in a *zig-zag* pattern ensures homogeneity.
- Fields, which are similar in appearance, production and past management practices, can be grouped into a single sampling unit.
- Collect separate samples from fields that differ in colour, slope, drainage, past management practices like liming, gypsum application, fertilization, cropping system, etc.
- Avoid sampling in dead furrows, wet spots, areas near main bund, trees, manure heaps and irrigation channels.
- For shallow rooted crops, collect samples up to 15 cm depth. For deep rooted crops, collect samples up to 30 cm depth. For tree crops, collect profile samples.

Procedure

- Divide the field into different homogeneous units based on the visual observation.
- Remove the surface litter at the sampling spot.
- Drive the auger to plough depth of 15 to 30 cm and draw the soil sample.
- Collect 10 to 15 samples from each sampling unit and place in a bucket or tray.
- If auger is not available, make a V shape cut to a depth of 30 cm in the sampling sport using spade.
- Remove thick slice of soil from top to bottom of exposed face of the V shaped cut and place in a clean container.
- Mix the samples thoroughly and remove foreign materials like roots, stones, pebbles and gravels.
- Reduce the bulk to about half to 1 kilogram by quartering or compartmentalization.
- Place the sub-sample in a clean bag and label it before sending it to lab.