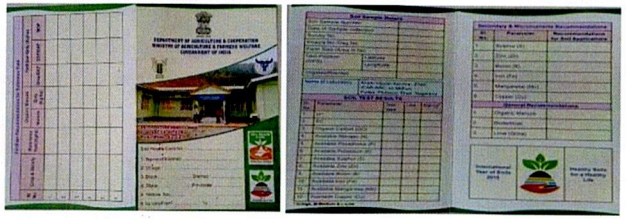
4. Sieve the soil material through 2 mm sieve.
5. Store the soil in a clean glass or plastic container or polythene bag with proper labelling for laboratory analysis.
7. For the determination of organic matter, it is desirable to grind a representative sub sample and sieve it through 0.2 mm sieve.
8. If the samples are meant for the analysis of micronutrients at-most care is needed in handling the sample to avoid contamination of iron, zinc and copper. Brass sieves should be avoided and it is better to use stainless steel or polythene materials for collection, processing and storage of samples.
9. Field moisture content must be estimated in un-dried sample or to be preserved in a sealed polythene bag immediately after collection

Soil Health Card

- Name and address of the farmer.
- Location of the farm.
- Survey number.
- GPS details
- Date of collection
- Soil test result
- Recommendations etc



Compiled & prepared by
Dr T Esther Longkumer
CTO-Soil Science
Dr Sanjeev Kumar Singh
Senior Scientist & Head
KVK Phek

Published by
Director
ICAR-NRC on Mithun, Medziphema.

For more information, please contact
Krishi Vigyan Kendra Phek
Porba, Pfutsero, Phek, Nagaland
Web: kvkphek.nic.in
Email: kvkphek@gmail.com

2023

COLLECTION OF SOIL SAMPLES: TECHNIQUES, PROCEDURES AND STORAGE

कृषि विज्ञान केंद्र - फ़ेक
(भारतीय कृषि अनुसंधान परिषद्)
राष्ट्रीय मिथुन अनुसंधान केंद्र
पोरबा, पोस्ट फुत्सेरो, फ़ेक- 797 107 नागालेंड (भारत)
Krishi Vigyan Kendra - Phek
(Indian Council of Agricultural Research)
National Research Centre on Mithun
Porba, Post Pfutsero, Phek 797 107 Nagaland (India)

Introduction

Soil testing is an integral part of field in the area of agriculture and is an essential component of soil resource management. Each sample collected must be a true representative of the area being sampled. In general, sampling is done at the rate of one sample for every two-hectare area. For soil survey work, samples are collected from a soil profile representative to the soil of the surrounding area.

Materials required:

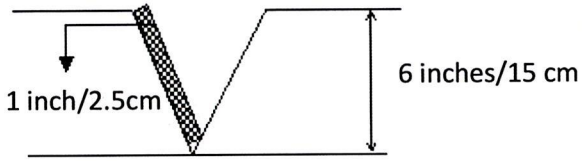
- Spade or auger (screw or tube type)
- Khurpi
- GPS
- Sampling bags
- Plastic tray or bucket
- Marker, scale
- Soil sample information sheet

Time of Sampling:

- Before planting of the next crops,
- Prior to application of any manure or fertilizer
- Rainy season should be avoided.

Procedure

1. Divide the field into different homogenous units based on the visual observation and farmer's experience.
2. Remove the surface litter at the sampling spot.
3. Drive the auger to a plough depth of 15 cm and draw the soil sample.
4. Collect at least 10 to 15 samples from each sampling unit and place in a bucket or tray.
5. If auger is not available, make a 'V' shaped cut to a depth of 15 cm in the sampling spot using spade.
6. Remove thick slices of soil from top to bottom of exposed face of the 'V' shaped cut and place in a clean container.



7. Mix the samples thoroughly and remove materials like roots, stones, pebbles and gravels.
8. Reduce the bulk to about half to one kilogram by quartering or compartmentalization.
9. Quartering is done by dividing the thoroughly mixed sample into four equal parts. The two opposite quarters are discarded and the remaining two quarters are remixed and the process repeated until the desired sample size is obtained.
10. Compartmentalization is done by uniformly spreading the soil over a clean hard surface and dividing into smaller compartments by drawing lines along and across the length and breadth. From each compartment a pinch of soil is collected. This process is repeated till the desired quantity of sample is obtained.
11. Collect the sample in a clean cloth or polythene bag.
12. Label the bag with information like name of the farmer, location of the farm, survey number, previous crop grown, present crop, crop to be grown in the next season, date of collection, name of the sampler *etc*.

Zigzag manner | Uniform slice 'V' shaped | Samples on thick paper | Divide into 4 parts

Discard opposite corners | Processing | Packed in polythene bag

Sampling Depth:

- Field crops-15-20cm
- Pasture crop-10cm.
- For deep rooted crops (sugarcane, cotton, plantation and horticultural crops)- up to 80-100 cm depth.

Processing and storage

1. Assign the sample number and enter it in the laboratory soil sample register.

2. Dry the sample collected from the field in shade by spreading on a clean sheet of paper after breaking the large lumps, if present.

3. Spread the soil on a paper or polythene sheet on a hard surface and powder the sample by breaking the clods to its ultimate soil particle using a wooden mallet.