

2. Making of composite sample (Quartering /Compartmentalization methods)



Quartering and compartmentalization methods

3. Packaging: Two scoops of both hands in a Khaki bag (approx.500g)



Recommended Khaki bag

Not Recommended

4. Label the sample

Fill in the following data on the sample information sheet provided in duplicate: Name of farmer, Tel contact, County, Sub-county, Ward, Village, GPS co-ordinates, date of sampling, cropping history, target crop for productions.

5. Shipment to the lab within 48 hour



Analysis in the laboratory

SOIL TEST REPORT			
Name	Mbakaya		
Address	P. O. Box 293 - Webuye		
Location of farm	Kuywa		
Crop(s) to be grown	Maize/ beans		
Date sample received	09-12-16		
Date sample reported	23-12-16		
Reporting officer			
Soil Analytical Data			
Field	Amos		
Sample designation	Lab. No. 156		
Lab. No/2016	6363		
Fertility results	Value	Class	
- Soil pH	5.27	medium acid	
Ech. Acidity me%	0.2	Adequate	
- Total Nitrogen %	0.16	Low	
- Total Org. Carbon %	1.55	Moderate	
- Phosphorus ppm	15	Low	
Potassium me%	0.38	Adequate	
Calcium me%	1.0	Low	
Magnesium me%	2.98	Adequate	

Interpretation:

- The soil reaction (pH) is acidic for crops' growth.
- Acidifying fertilizer like DAP should be avoided.
- Nitrogen, phosphorus and calcium are deficient.
- Soil organic matter should be improved.

Recommendations:

- During land preparation apply 2-4 tons/acre of well decomposed manure or compost
- At planting time apply 100 kg/acre of compound fertilizer
- Top dress with 50 kg/acre of calcium ammonium nitrate (CAN).

6. Soil analysis service providers in the region are:
KALRO-Alupe, Bungoma Mobile Laboratory, KEPHIS-Kitale,
University of Eldoret and Maseno University

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SOIL SAMPLING AND TESTING



Introduction:

Soil sampling and testing refers to taking a representative soil samples for analysis in order to determine its composition, nutrient content, and the status of other properties like pH level in relation to the requirements of the target crop.

Importance of Soil Testing

1. To prevent environmental degradation by runoff and leaching of excess fertilizers
2. To maximize crop production by only applying the right quantities of fertilizer
3. Ensures efficient use of fertilizer resources hence minimal wastage of inputs. Soil sampling should be done by agricultural extension service provider.

Sampling Tools and Equipment

1. Soil Auger/Jembe



2. Garden trowel



3. Trough



4. Khaki bags



5. Marker pen



6. GPS Gadget



7. Protective costumes
(gum boots and dust coats)

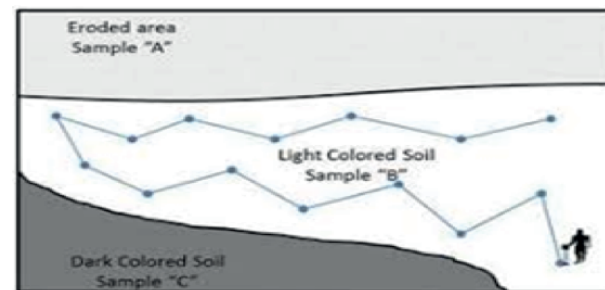


Sampling Process

1. Demarcate the field based on topography, soil type, soil colour, vegetation cover and drainage to form the sampling boundaries



2. Mark the sampling areas in different sampling unit boundaries using any of the three sampling methods (Zigzag, random and Transverse).



3. Ensures efficient use of fertilizer resources hence minimal wastage of inputs or contribution to soil degradation.

Sampling Procedure:

- Use Soil Auger/Jembe/Panga
- Clear the surface debris using a shovel
- Take soil core between 0 cm and 30 cm depth
- Put each core in to the trough

Technique of Sampling:

1. Using an Auger at a depth of (25cm-30cm)



Using a jembe at 90° degrees vertical angle at depth of (25-30 cm).