

SOIL SAMPLING PROCEDURE FOR FIELD CROPS

Equipment Needed

1. Sample bags (we can supply at no charge)
2. Auger or shovel
3. Bucket
4. Sample submission forms (please request these from us)
5. Field logbook
6. Labels or marker pens

Selecting Sample Areas

When you are selecting areas to sample you must remember that there is no set size but we don't recommend single sampling areas of > 20 Ha. The actual size of the sample area is determined by certain factors. Areas that differ in any of the following **must** be sampled separately: Soil type, previous cropping, previous lime or fertilizer applications, slope, drainage

For example.....eleven samples have been taken from the area below....

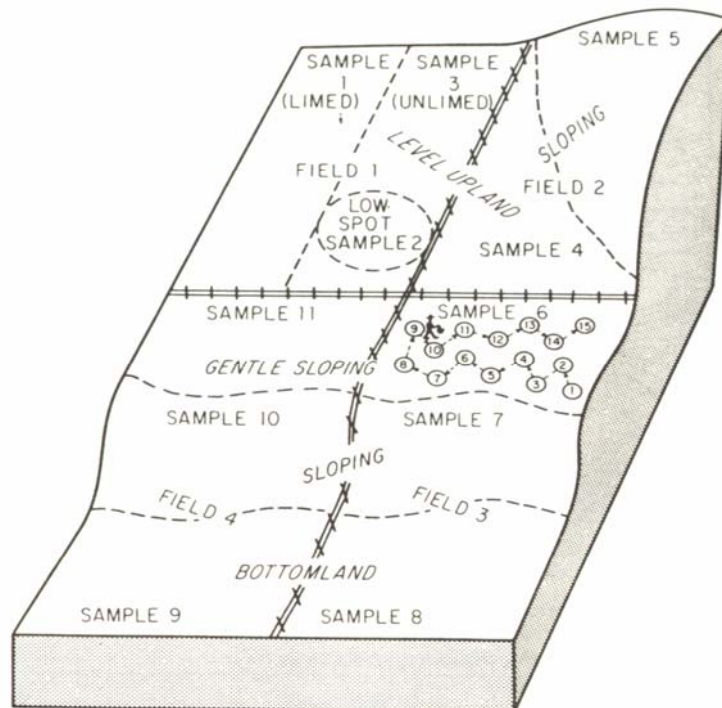


FIGURE 11.10. 2

Where very large areas of land are uniform, divide the land into areas that would be treated as a unit (i.e. one field), and sample these areas individually. One sample should not represent more than one field, as individual fields will have had different treatments in the past. As mentioned, it is recommended that one soil sample should not represent more than 20 to 30 Hectares regardless of apparent field uniformity. This is because non-uniformity is usually difficult to assess over broad areas of landscape. Large fields can be divided for sampling purposes into two or three smaller sections.

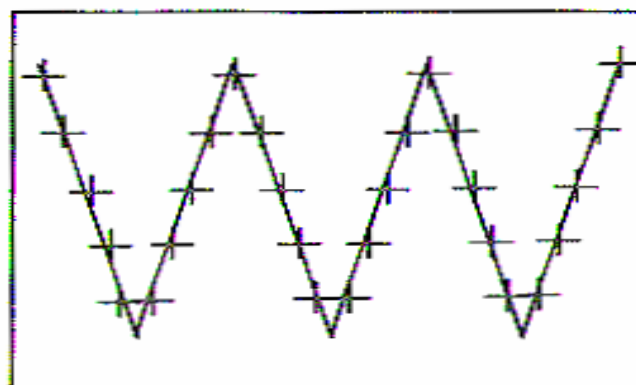
Accurate sampling is absolutely critical to a successful soil management plan as all recommendations are based on the samples submitted to labs.

Sampling depth

Depth of sampling is critical because tillage and nutrient mobility in the soil can influence nutrient levels in different soil zones. Sampling depth depends on the crop, cultural practices, tillage depth and the nutrients to be analyzed. Plant roots, biological activity and nutrient levels occur mainly in the surface layers (0-25 cm) hence most of the soil samples are collected within this layer. For tree crops, samples from 30 – 50 cm can also be collected.

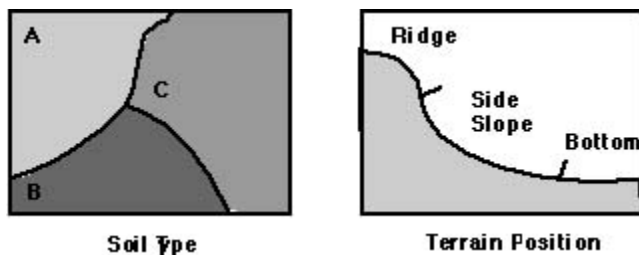
Sampling Procedure

One sample should consist of between 20 - 30 cores taken from the set area. It is recommended that the cores be taken from the area in a zigzag pattern as shown in the field below:



Once in the field carry out sampling as follows:

- 1) Divide your field into areas which have the same soil type, color, slope, fertilizer and crop history



- 2) Scrape away surface litter and crop residues and sample the whole core from the true soil surface to 25 cm depth
- 3) Take between 20-30 cores from each uniform soil area. Place each core in a bucket and mix them thoroughly once you have taken all the cores.
- 4) Fill the soil sample bag half full (**500g**) from this mixed representative sample.
- 5) Several different tools such as a soil sampling tube, soil auger, or spade may be used in taking soil samples. Label the bag carefully with your company name, farm name, field name, sample depth and crop to be grown.
- 6) Avoid taking samples from areas such as lime piles, fertilizer spills, gate areas, livestock congregation areas, poorly drained areas, dead furrows, fertilizer bands, old fence rows, or any other unusual areas.
- 7) Do not use galvanized, soft steel or brass equipment if trace metal analyses are desired.

Sample handling and dispatch to lab

If possible soil samples that are moist should be air dried on site away from dust contamination and not in direct sunlight.

Please then dispatch the samples to our lab with all the correct paperwork - please notify us if you require samples to be collected from any address in Nairobi.

For more information please email us on healthy_soils@cropnuts.com or by phone + 254 (0)736 839933 or +254 (0)720 639933.