

Soil Sampling

An accurate soil analysis is vital to understanding your soil. We use high quality laboratory analyses that work specifically for our system. Before sending soil samples to us please check out Taking a Good Soil Sample.

From the basis of a detailed soil analysis and - importantly - the additional information that you provide by completing the Soil Sample worksheet, we build a specific fertilizer recommendation for each soil sample, tailoring the recommendations to your operation and goals.

The recommendations will utilize the proven principles of the Kinsey/ Albrecht system of soil fertility management. The aim is to correct and raise the overall soil fertility to improve and maintain yields and/or crop quality. If we have previously made recommendations for the same soil location, and it has been properly identified as such, then these previous analyses and recommendations are to be considered.



Fertilizer Recommendations

Our recommendation report for each sample has two parts: the soil analysis and recommendations for achieving the proper fertility level. The basic soil analysis will normally include:

- Total Exchange Capacity (T.E.C.)
- Organic Matter (Humus) as %
- Nitrogen (N released from colloidal humus)
- Sulfate (Expressed as elemental sulfur) in ppm
- Phosphates (as P₂O₅)
- Olsen Value (Included at no charge if pH is above 7.5)

- Percentage Base Saturation of:
 - Calcium
 - Magnesium
 - Potassium
 - Sodium
 - Other Bases
 - Exchangeable Hydrogen
- Calcium, Magnesium, Potassium, and Sodium levels-in kg/ha*
- Trace Elements:
 - Boron in ppm
 - Iron in ppm
 - Manganese in ppm
 - Copper in ppm
 - Zinc in ppm

Additional Tests (Optional)

- Cobalt in ppm (We encourage this test for each sample that you send for the first time in any area that will provide feed for livestock or food for people).
- Molybdenum in ppm
- Chlorides in ppm, Salt Concentration in d/Sm
- Aluminum
- Limestone Analysis

Our recommendations for a specific plan of fertilizer amendments are tailored to your short- or long-term goals and consider the previous history of crops, fertilizers at the location, farming conditions in the area, your type of operation (for instance organic or conventional), fertilizer preferences, and other factors in addition to the condition of the soil. Where appropriate, the recommendations will include additional notes on materials to be used, application method and timing. Please feel free to discuss your requirements beforehand. Our aim is to provide a service that will achieve excellent results for you.

Taking a Good Soil Sample

The way soil samples are taken is extremely important. After all, an analysis is only as good as its sample. Following the instructions below will assure that the samples you send are taken in the right way.

When to take a soil sample? Soil samples may be collected at any time of the year, provided that the area is not suffering from prolonged drought, that no nitrogen has been applied in the last 30 days and no Sulphur has been used in the last six months.

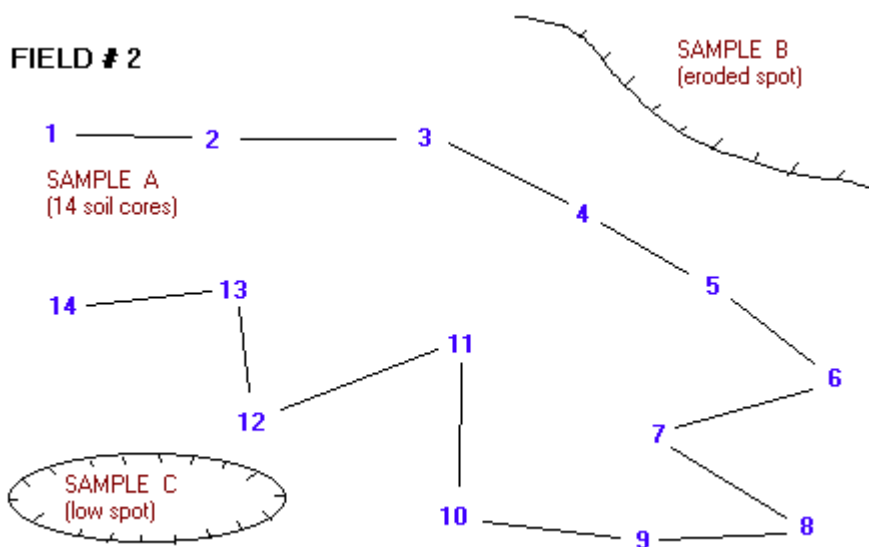
Generally, sampling should be done every year if fertility is high and / or trace elements are being used to achieve top yields. CAUTION: without special arrangements we recommend that, if possible, no soil samples ever be sent for analysis when the soil is extremely dry.

Prepare a map of the areas being tested. A good map makes your sampling repeatable from year to year and is useful at the time of fertilization. Designate a number or name with a maximum of 8 characters for each field. Use permanent lines such as roads, ditches, and fences for boundary lines.

Divide the field map into areas that have the same soil colour, slope, texture, drainage, and past history of erosion. Each area should have the same cropping history, fertilizer and manure treatments and the same intended crop for all the ground within that area. Assign each of the areas sampled with a specific number or letter (or a combination of both) so you can correctly identify them.

For example, Field #2 could have three areas: A - the high ground, B - the sloping ground, and C - the low, level ground. The numbers written on the sample bag could be 2A, 2B, and 2C.

Sample Map:



It is recommended that sampled areas represent no more than 20 acres (8-9 hectares) the first year our testing program is used, even if soils are uniform in texture and terrain. Areas with taller or shorter plants, different weed or grass patterns, higher or lower yields, etc., should be avoided, or sampled separately if large enough to fertilize properly. The next time samples are taken, combine those areas that by analysis have

shown to be alike. You may wish to combine very small areas that all have the same characteristics, into one composite sample.

Sample at least 100 m away from gravel or crushed limestone roads and stay at least 6 m away from fence rows or the edge of a field.

Avoid sampling the following locations (or sample separately):

- Eroded hillsides or low spots
- Terraces, ditch banks, lid roadbeds or fence rows
- Animal droppings, urine spots, burn piles, lid manure, straw or haystacks
- Areas around sheds, barns or where buildings have formerly stood
- Lime, fertilizer, chemical spill areas and fertilizer bands
- Dead and back furrows
- Drought-stressed areas
- Areas where large amounts of sulphur have been applied in the last two to six months, or where nitrogen has been knifed in or recently broadcast in large amounts.

Collecting the Samples

The sample bag: Use a new soil-sample container, plastic bag or plastic container. Soil-sample bags are available at Afri Agri Products Limited. Zip-loc bags are fine - as long as they have never been used before- but put Scotch tape over the writing or attach masking tape to write on because all types of marking ink can rub off the bag during shipment. Do not use paper sacks from the grocery store, bread wrappers, or such items, due to possible contamination. Avoid using a plastic bucket that has been used for other purposes. Even repeated washings of a bucket used to mix salt and minerals for feed can still result in contamination of the sample.

Label the sample bags with the farm name, field number and sample area. Prepare a map or sketch of the area for your own records. Make sure the labelling on the bag matches the number of the field and area on your map. Labelling the bags to match the areas before taking the sample helps.

A SOIL PROBE is recommended for easiest and best sampling results. Using a soil probe or shovel, sample down to a depth of 17cm. For no-till crops, orchards, vineyards, pastures, hay meadows, lawns, etc., where soils will not be worked, the depth should be 10cm only. Sampling to the correct depth is extremely important as it can impact the recommendations.

Use several different probes from the area to make up the total sample and place this into the sample bag. Removal of obvious debris (roots, leaves, etc.) is fine but

unnecessary as it will not adversely affect the sample. If you do remove debris from the sample, be careful that none of the actual soil is removed with it.

Probe the soil every 50 to 100 paces, always take a minimum of 20 probes per composite sample for smaller areas, and maximum 30-40 from larger areas.

Please remember this is a very detailed analysis, which can only be as accurate as the sample you send.

Sending Soil Samples to Afri Agri Products Ltd.

Soil samples may be sent wet or dry (use a Zip-loc bag or plastic lined bag for wet samples). Samples can be dried at home by spreading them on waxed paper and air-drying. **DO NOT DRY THE SAMPLES IN AN OVEN!** It is okay to leave samples to dry under the sun.

Please feel free to contact us on sales@afri-agri.com or [WhatsApp](#) to assist you with filling in the Soil Sample Worksheet details.
