

Soil and pasture sampling instructions



Why test?

Some common objectives of soil and pasture testing are:

- To determine the nutrient status of soils and pasture
- To indicate clearly the existence of any deficiency, excess or imbalance of major nutrients
- To aid in assessing fertilizer and lime requirements for growing resilient and healthy pastures

When to test?

Testing soil and pasture is usually done in a period of active growth, so either spring and autumn are the most common times.

- Spring and autumn are the usual times for applying fertiliser, so a soil test before purchasing fertiliser is advised
- Sampling can be done outside of these seasons, but remember for any future years to sample at the same time of year each time
- It is best to avoid very dry or very wet periods
- Do not sample within 3 months of fertiliser or lime being applied

How to collect soil samples?

First of all, you need to decide where to collect the soil samples from. Choose areas of similar landscape, soil type (if known), fertiliser history and land-use. For small blocks (<10ha) this may be one area that represents the majority of the block.

Fig.1 Collect separate samples from areas that are different in any way. In the above diagram, 4 x separate sampling areas (for 4 x samples) are shown.

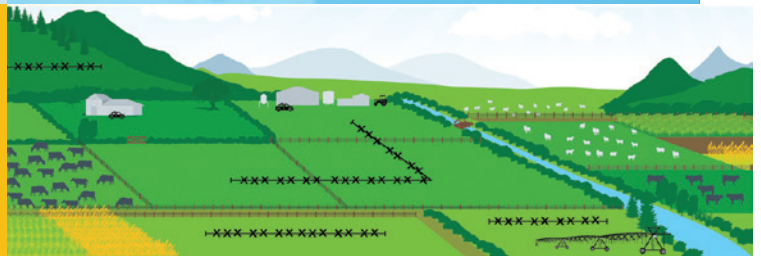


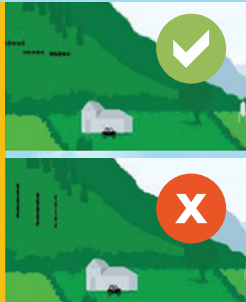
Fig.2 Use a 75mm soil sample auger for collecting soil samples under pasture, or a 150mm auger for crop or horticulture soils.

- One sample is made up from collecting 15-20 soil cores and placing in a clean sample bag (~500g)
- Using a soil sampling auger (which may be available on loan from a rural merchant store):
 - Take 20 cores by walking in a random or zigzag pattern across the selected site; or
 - Select a straight sampling line, or transect, 100 - 200 metres long across each of the chosen areas. It's a good idea to permanently mark these transects, so that future samples can be taken from the same line. Collect a core sample every ~10 metres until 20 cores samples have been obtained to create one sample bag for analysis from each transect

Fig 3. Dung and urine patches are shown as humps of long, green growth and should be avoided when collecting soil samples as they are 'hot-spots' of nutrients.



Fig 4. For hilly land, collect samples across the side of the hill rather than up-and-down.



- Avoid sampling near dung and urine patches, fences, hedges, tracks, gates and satock camps
- In hill country, sample across the slope rather than downwards and collect up to 30 core samples to minimise sample variation. More than one transect from a chosen area may be required if the terrain is such that a single line is not feasible. In this case, sample from the shorter transects in a chosen area and combine samples into one bag
- Write the sample name (paddock or block name) on the outside of the sample bag with an indelible pen
- Either order tests online using the recommended tests for the described land-use, or manually complete the Analysis Request Form from the DIY kit with as much detail as possible
- Our website describes what tests may be best, but you can also phone to the laboratory customer services line if help is needed on test selection
- Place samples and order form into the courier bag and send to the laboratory asap
- If samples cannot be sent on the same day as collection, store these in a cool place for not more than 3 days

How to collect pasture samples?

Pasture testing can help to show up any nutrient deficiencies that may be a reason for poor growth, or may be affecting livestock health.

It is most often done during periods of active growth. To check on the plant nutrition, it is usual to collect a 'clover-only' samples from areas of poor growth. Otherwise a general sample of Mixed Pasture can be tested for all of the major and trace elements needed by plants and animals.

- Pasture samples can be taken using clean, rust-free shears or scissors, or by grab samples, avoid 'pulling' and subsequent soil contamination
- Avoid contaminating pasture samples with soil, dust and trace element sprays and drenches, as the presence of these will affect the result
- Approximately 500gm of fresh sample is required cut to grazing height, once again avoiding any dung or urine spots, fence lines, trough areas

Fig 5. Pasture samples can be taken using clean, rust-free shears or scissors.



What to do with your test results?

Hill Laboratories does not provide fertiliser or other land management advice, as our core business is provision of analytical services.

Where adequate reference information is available, Hill Laboratories test reports for soil and plant samples will include a histogram graph indicating results as low, medium or high for indicative guideline purposes.

Recommendations should be sought locally via advisers (e.g. fertiliser agents, rural merchants, consultants) who have experience and expertise in agriculture.