

Soil sampling for lab testing



A brief look at why, when, where, and how. This factsheet aims to aid the 'Knowing Your Soils, South Australia Ute Guide' and the 'Knowing your Soils' handbook.

Why sample

Soil testing will help you identify production constraints and track improvements as you implement different management strategies, adding to your profitability and sustainability on farm.

When to sample

At least once a year in early autumn. Test at the same time each year and roughly the same time of day. If possible, increase testing to twice a year (autumn and spring)

Where to sample

Avoid areas that are different to the rest of the paddock (tracks, gateways, around water points, shelters, where there is frequent urination and dung, or high amounts of Nitrogen applied). If there is variation, take several samples to represent varying soil types.

How to sample

You can either sample yourself, using your own plastic bags and send to a lab or speak to your local agronomist as they can sample for you.

The main ways you can sample your soil are by:

- A spade
- Dig stick / corer

Make sure the equipment is clean, free from old soil or rust, and no traces of soap or detergents. Most labs will need about 300g of soil for each sample.

For a representative sample, choose one of the following sampling techniques:

- Walk a zig zag line between two points across your area and take several samples along the line
- Sample in a grid pattern across the area
- Sample in a random pattern across the area

Sampling depth is dependent on the purpose of the sample. Topsoil sampling (0-10cm) is standard for most crop types but sampling down to at least 30cm is recommended to understand soil condition at root depth.

Dig stick/corer

Available to borrow from Landscapes Hills and Fleurieu.

Some of these samplers have a set depth and others you will need to mark the depths (0-10cm, 10-20cm, 20-30cm) with a marker or electrical tape. The samplers where you need to mark the depths, can be used to take deeper tests, i.e. greater than 10cm.

Remove debris from soil surface. Take between 30-40 samples for each depth in the sample area, that should be enough to meet the labs 300g requirement. If sampling multiple depths, have a bucket for each depth, (one bucket for 0-10cm, one bucket for 10-20cm etc). Empty each sample into a bucket as it's taken. When finished, mix the soil in the bucket(s) to make sure it's uniform and put it in a bag. Label the bag and the depth it was taken at, i.e. 0-10cm, 10-20cm etc.



Spade

Remove debris from soil surface. Use a straight-edged spade and dig straight down into the soil at a depth of 0-10cm. Dig again just next to it to get a vertical, rectangular slice of soil 10cm deep. Place this slice into a bucket. Take at least 10 samples to meet the 300g requirement. Mix samples in the bucket, taking out large rocks, sticks or stones. Small roots are fine to leave in. If sampling additional depths, repeat process, but start digging at the 10-20cm layer and so on.



Soil sampling providers in the Hills and Fleurieu (not an exhaustive list)

What type of test you do will be determined by what you need it for. Speak to the lab, agronomist or Landscapes Hills and Fleurieu for more information.

Examples of providers:

- Nutrien Ag Solutions
- Pinion Advisory
- DJ's Growers Services
- Coopers Farm Supplies
- FPAG

Examples of soil laboratories:

- Eurofins, APAL (SA)
- Nutrilab (QLD)
- CSPB (WA)
- EAL (NSW)

There's more to understanding soils than just a chemical test

Biological and physical components of the soil can also give a good indication of the health and any constraints in the soil.

The following are examples of some free tests you can do yourself on your property:

- Soil your undies (soil microbial test)
- Ground cover and weed cover
- Leaf colour
- Soil organism type and earthworm count
- Root development
- Water repellence, infiltration and non-wetting soils
- Topsoil colour and soil compaction
- Soil texture, pH, dispersion and slaking

Refer to the Knowing Your Soils, South Australia Ute Guide for more information. Available from Landscapes Hills and Fleurieu.

Further information

Further information is available through Landscapes Hills and Fleurieu

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