

How do I take soil tests?

- The issue:** Soil testing is a management tool which gives a measure of soil fertility and conditions. Incorrect soil sampling techniques can produce misleading results.
- The impact:** Sub-optimal soil conditions can reduce dry matter production, impacting livestock production. Soils tests allow you to identify what may be limiting production and invest in appropriate inputs.
- The opportunity:** Accurate analysis allows decisions to be made with confidence.

Managing soil fertility and conditions are essential for good pasture and crop growth. Testing soils regularly can help identify if there are components of the soil limiting production. Test results can then be used to plan applications of fertiliser and ameliorants, such as lime and gypsum, which can help optimise productivity, profitability and sustainability. Tests can also identify soils which don't require inputs.

How do I know when to take a soil test?

The best time to test is when there is some soil moisture, which makes it easier to take the sample, but avoid waterlogged conditions.

It is important to take soil samples at the same time of year, each year, to reduce variability in soil conditions and allow results to be compared from one test to the next.

What tools do I need?

Soil sampling involves taking a number of cores of a consistent size and at a consistent depth. Specially designed soil samplers which take a 10cm core are preferable to using a shovel. A shovel will take samples at variable depths and collect too much soil per sample.



Using a soil sampler makes soil testing easier

Soil samplers are commercially available for around \$200. An alternative is to contact your local agronomist or reseller who may be able to loan out a soil sampler or even offer a soil sampling service.

Getting it right

Look at the whole paddock and work out what areas to avoid before starting sampling. Follow these tips to ensure your sample will deliver meaningful results:

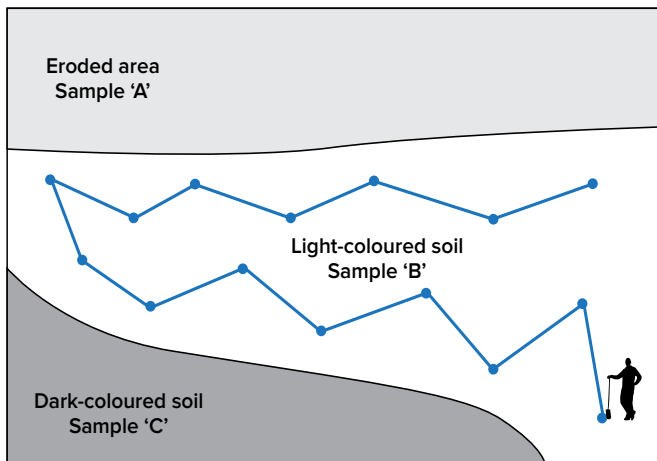
- Samples should represent soil conditions in the particular paddock.
- If there are distinct differences within a paddock, there may be different soil types. If different soil types cover significant areas of the paddock you may need to take sets of soil samples. If a different soil type only covers a small area, then just sample the predominant soil type.
- Consider the variations in the paddock determined by soil type, land use, paddock history and animal grazing behaviour before selecting the sample sites.
- Avoid sampling along fence lines, stock camps, under trees, near buildings and troughs etc, as these areas will have different fertility levels to the rest of the paddock and will give unrepresentative results.
- Avoid sampling from urine and dung patches. These areas are often only obvious when the pasture is actively growing.

Choosing sampling sites

There are two common soil sampling patterns – a zig zag (see Figure 1) and a transect pattern.

The most important thing is to make sure the sample taken is representative of the paddock.

Figure 1: Choosing sampling sites



Use GPS technology on your mobile phone to record the sampling sites so the same sites can be retested in the future.

How much soil do I need?

Multiple soil cores are essential to produce a representative sample and give a true indication of the soil in a paddock.

Around 20–30 cores are generally required to produce soil tests for most nutrients and soil pH.

More cores may be required for more specific tests such as soil carbon – check with the soil testing lab regarding requirements before sampling.

Once you have collected the required number of cores, mix the samples and place them in a bag labelled with your name, address and the paddock name.

Where do I send the samples?

There are a number of soil testing laboratories accredited by the Australian Soil and Plant Analysis Council.

To find your nearest laboratory visit aspac-australasia.com/certified-labs

More information

Making More From Sheep's: *Healthy Soils* module
makingmorefromsheep.com.au



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