# soil sampling

# To get the best out of any paddock, it's vital to know its condition.

Soil sampling and testing can provide invaluable information to direct management decisions. However, sampling must be carried out in a way that accounts for the variability that is often present. Sampling can be a major source of error in assessment of soil conditions.

# **KEY POINTS**

- Know your purpose for soil sampling and devise an appropriate strategy.
- ► Have 30-40 subsamples combined thoroughly for each sample.
- Exclude atypical areas in your subsamples.
- Sample areas of different landscape, land use or production separately.
- Ensure the sample represents the soil into which the seed will be sown.
- Use a corer to ensure that the same amount of soil is sampled from each depth.
- Allow enough time to analyse, obtain results and decide on a management option:
  - within 1 month (or 4 6 weeks) prior to fertiliser application or grazing or
  - ▶ 6-12 months after liming
- Farming operations can stratify soil properties – sample accordingly.
- If monitoring annually, sample at the same time each year.
- Keep accurate records so you can use the information to make management decisions and monitor trends over time.
- Keep sampling gear clean.
- Clearly label all samples and send them off quickly.
- Always use a NATA accredited lab and check the analysis method used is ASPAC accredited.

This factsheet was written by Dr Jason Condon and Abigail Jenkins from NSW DPI as part of the Extension of best practice principles for identifying and managing soil limitations in southern and central NSW (GRDC Project code FLR1909-001SAX).

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#### How many samples?

Where soils are known to be reasonably uniform, only one sample (made of 20-30 subsamples) is sufficient. However, where variation exists, more samples are necessary. Where there are major areas of difference, a separate sample should be collected from each area. This is called 'zone management'.

# Where do I take my subsamples?

Ensure that the entire area is represented in the sample(s) you send to be analysed. Leave out odd or atypical areas. Practices such as control traffic can increase the spatial variability and alter soil chemistry. Do not collect soil within one month of fertiliser application or grazing, or 6-12 months after liming.

#### Depth

Make sure the entire depth you have chosen is sampled equally. A spade or trowel can bias a sample, as it is easier to collect more from the top than the bottom. Using a corer ensures that the sample contains the same amount of soil from each depth within that sample.

# When to sample?

Samples should be taken four-six weeks before fertiliser or amendments are to be applied, to allow time for analysis and reporting. Because conditions, and hence plant nutrient availability, fluctuate over the course of a year, sample at the same time each year.





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