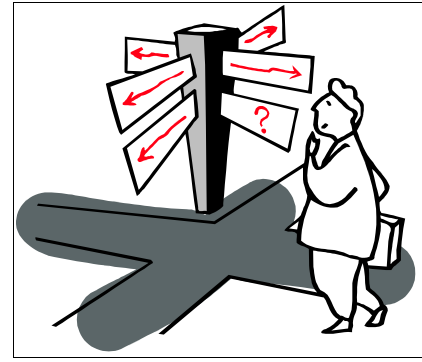


## ***SWEP FACT SHEET #2***

### ***How do I take a Soil Sample?***



***Collecting a soil sample is not difficult, but it is the most important part of the soil testing process. The results of your soil test can never be any better than the sample you take, so it is best to make it a good one!***

***In this Fact Sheet, we will look at the requirements for a good sample, how much soil, what depth, which paddock and so on.***

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***Before going out to get your sample, make sure you have a clear objective.***

A soil test is like a road sign in the mountains – it may not show a direct path, but it will keep you on the right road. Even so, it is important to know where you are going.

For example, if you are looking at a new property, you may only want a ‘snapshot’ of what you have to work with. Alternatively, you may have a specific problem to deal with, or just want to keep track of changes to ensure your management decisions are having the desired effect.

If you have a definite problem, the process is fairly straightforward: Take two samples – one from an area that shows the problem and one from an area that appears unaffected. The difference between the results will likely point you to the cause.

Of course, in cases like this, you should also tell the Laboratory about the problem, so they can give you more specific advice.

For the most part, however, people want soil tests to tell them how things are going: Whether soil fertility is improving or declining, potential problems like acidity or salinity are beginning to develop, and so on. To be effective, soil monitoring needs only one thing – **consistency!**

In the beginning, choose the areas of the property to sample and keep going back to them with every round of testing (about every two years). Stick to the one laboratory – differences in testing methods and reporting, etc. will only cause confusion. And finally, follow the same path and use the same technique each time.

### **How Many Samples?**

One sample can cover up to 100 acres, but remember that soil is extremely variable, so you are looking for a good average over a particular area. Choose the area and number of samples by looking at type of soil (colour & texture), topography and management history.

If you have mainly one type of soil and the same topography across the whole property, then one sample covering the whole property may be enough.

Even if the soil is fairly consistent, there could be a distinct change such as pasture on hills and cropping on flats. Alternatively, there could be distinct changes in the soil. In cases like these, you will need a sample from each distinct ‘section’ of the property. But follow a set path when you collect the soil so you can come back and re-test every two years (at the same time of year). In this way you will be better able to track any changes that occur over time.

## **Collecting the Sample**

Remember, you are looking for results that give a reasonable picture of the soil within the root zone of the plants. So the depth you sample should match the depth of the feeder roots.

For pasture this is 10cm, for field crops and vegetables – 15cm, for tree and vine crops – 25cm. Very deep samples may need to be taken from two levels – if there is a clear change from topsoil to subsoil.

The best tool to use is a stainless steel core sampler. You need to collect soil from 20 – 30 spots across the paddock, mix the soil VERY thoroughly in a clean plastic bucket and retain about 300g for testing.

**NB. Only use stainless steel samplers. Other metals can produce distorted results for Iron, Copper or Zinc, etc.**

When choosing the spot to take each soil core, avoid areas near fences, gates, troughs, livestock camps and tracks. Also avoid dung & urine patches and areas where hay has been fed out – anywhere that may distort your result.

Research shows that a zigzag path gives the most reliable result, but choose your path carefully, so you can easily go the same way again next time.

### **Some basic Guidelines for Collecting samples:**

- **First make sure you have a defined objective for your testing program.**
- **If you have a specific problem to deal with, sample two separate areas that will give a clear comparison.**
- **If you want to monitor changes in your soil over time, sample each distinct area separately and re-test every two years.**
- **Collect your sample to the appropriate depth, from 20-30 spots around the paddock.**
- **A zigzag pattern is best, but make sure you can re-trace your steps when re-testing.**
- **Use only stainless steel samplers to avoid contamination.**
- **Do not collect soil near gates, fences, troughs or livestock camps.**
- **Avoid dung & urine patches, or areas where hay or silage has been fed out.**
- **Do not mix soil from areas with different types of soil, or land-use, etc.**

For more information on the material covered in this Fact Sheet, contact SWEP on (03) 9701 6007 or talk with your local SWEP Agent.