GUIDE TO TAKING SOIL SoilBioLab SAMPLES



what do I need to collect good soil samples?



02. how do I collect a good soil sample?

PRELIMINARIES

Prepare a sterile zip lock bag such as a sandwich bag for each site where samples are to be taken.

Clearly label each bag using a permanent marker, such as a Sharpie, with the customer name, sample site location and date. It is good practice to do this on each side of the bag in case ink rubs off in transit.

SAMPLING AREA

In certain situations, such as a study or trial, it may prove beneficial to plan for a multiple number of (sample) replicates to ensure it is possible to determine statistical significance if appropriate.

Depending on the size of the area and number of plants being assessed, take samples from **5**, **7** or **9** carefully planned locations using a 'W transect', ensuring the whole soil profile is represented.

Soil should be collected from a mixture of distances between the base of crops and plants, ranging from 2cm up to approximately 30cm, covering the whole group or area.

The 'W' method is adaptable to most cohorts of trees, plants, shrubs and field or area shape but you should avoid the edges of an area of land, field or plot, gateways or sections that are not representative of the sample section as a whole.





Samples taken from individual trees should be taken in a radial pattern at the cardinal points around the centre of the green or tree.

Depending on the size of the tree and/or estimated root area, samples may be collected from different distances from the stem base (approximately 3, 4 and 5 meters)





03 sampling



technique

FOR SOIL ANALYSIS

Using an auger or trowel take samples to a depth between 2–10 cm.

If you are using a spade or trowel, dig a V-shaped hole to sample depth, then cut a thin slice with a garden knife or clean bladed implement.

Remove the surface section of the sample that may contain grass or debris and organic matter that may affect the analysis.

Aggregate and mix the samples in a clean plastic bucket.

If planning on having comprehensive biological and chemical analysis, you should aim to collect at least 500 a (1 litre) of soil and roots from the aggregated samples from the site into the prepared bag, leaving a little air in the bag.

FOR MYCORRHIZAL **ANALYSIS**

When testing for mycorrhizal colonisation. ensure that there are tree/plant roots present in the prepared sample.

Often it is better to sample tree roots as a separate process, collecting fresh (living) roots from the upper soil fraction - depending on the plant species these may be found in close proximity to the plant base (< 10cm) or further out in the root area.

Collecting an adequate amount of roots from throughout the sample area is vital to achieving accurate information. This may require collection of a minimum 5 or 6 root fragments, of approximately 5cm each, from different points or crops within the sample area.

In order to preserve and protect them, root fragments are best placed in the bag of soil, from the same sample group, for transporting.

Sometimes it easier to extract the whole plant (including roots) and place this in a sample bag with the root ball of soil, for analysis.







bow should I store and send my samples?

STORAGE AND PACKAGING

Store samples in a cool bag whilst in the field.

After collection and prior to packaging and sending to the lab, keep the samples cool and out of direct sunlight. A typical household fridge will be fine.

Place in a padded envelope and send by overnight post or courier to the laboratory.

We recommend not sending samples to a laboratory if they will arrive at the weekend.

SAMPLE RECORD

Include a sheet of paper in the sample envelope listing the samples included.

On the back write any additional information for reference such as – sampling date, conditions on the day, water saturation, approximate temperature, ground notes if known e.g. compaction, soil character (heavy clay/sandy loam etc), land management (ploughed, intensive use by stock, people, dog fouling etc).



Samples to: SoilBioLab, 213 The Commercial Centre, Picket Piece, Andover, Hampshire SP11 6RU UK For more information please contact us at: info@soilbiolab.co.uk or call us on +44 (0)1264 749761.

