



SOIL SAMPLING

Planting trees and waiting to see if nutrient problems appear can be expensive and risky. Valuable growth can be lost.

Analysing the soil can help remove some of this uncertainty.

WHY SAMPLE SOIL?

Results of soil chemical and mechanical analyses can give:

- A **firm** indication of likely phosphorus deficiency.
- A **good** indication of likely nitrogen deficiency.
- A **reasonable** indication of potassium and magnesium deficiency.
- Detect other unusual factors about the soil.

HOW TO COLLECT SOIL SAMPLES

1. Decide the number of different areas to be sampled - look at soil types, topography, fertiliser history etc.
2. Using a stainless steel tube sampler such as a modified Hoffer tube collect separate samples for each area, avoiding small patches not typical of the area. Overlying organic soil layers (litter, ferment and

humus layers) need to be removed before collection of the mineral soil.

3. **One sample should consist of at least 20 cores, taken to a depth of 30cm for forestry soils or 15cm for other soils.** Collect a core sample every ~10 metres or at a regular spacing over the whole area until 20 core samples have been obtained to bulk into one sample bag. You can reduce the size of the soil sample collected by carefully mixing and subsampling prior to sending (500g is a good size sample).

Note: Try to sample areas before applying fertiliser and do not sample within 3 months after applying fertiliser. Try to sample areas before major land clearing operations such as burning or ploughing.

4. Place the samples in a clean plastic bag.
5. Identify the samples clearly.
6. Package the samples in a strong carton and include all essential information on a **Soil Input Form** (available from www.veritec.co.nz). If you do not have

any forms, refer to the section that lists the information you should supply with your samples.

- Clearly mark the package **SOIL SAMPLES**, and send them within 5 days to:

Veritec
49 Sala Street, Rotorua
Private Bag 3020, Rotorua 3046

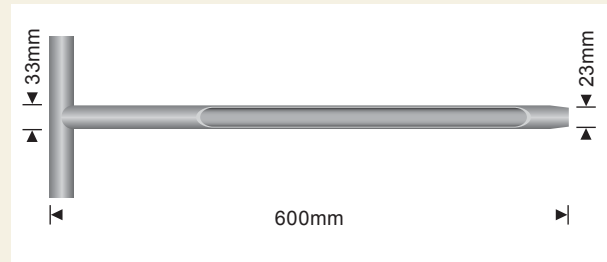
If you require further information email Kaye Eason at kaye.eason@veritec.co.nz or telephone 07 343 5400.

INFORMATION TO SUPPLY WITH YOUR SAMPLES

- your name and date of collection
- the forest/area the soil was collected from
- compartment number or alternative identifier
- trial and workplan numbers if applicable
- species and age or year to be planted
- previous vegetation cover or rotation number
- fertiliser history
- expected weed competition
- depth of sample, e.g. 0-30cm
- what tests you would like
- any other relevant details

EQUIPMENT FOR SAMPLING

- A modified stainless steel Hoffer sampler is an ideal tool for taking soil samples.



- A modified Hoffer sampler can be supplied or purchased by contacting Veritec.
- Alternatively you can use a spade if the soil is difficult to sample with a tube sampler.

WHAT HAPPENS TO SOIL SAMPLES AT THE LABORATORY?

- After samples are unpacked and logged in, a unique laboratory number is given to each sample for precise identification throughout the analytical process.
- The samples are air-dried then put through a 2mm sieve.
- The samples are analysed by chemical and physical tests.
- A Standard Soil Test will determine:
 - pH of the soil
 - concentration of total carbon and nitrogen as a %
 - concentrations of available phosphorus, potassium, calcium and magnesium as mg/kg.
- Results are sent back to the customer, usually within two weeks, along with an interpretation (if requested).



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