



How to sample a multi species pasture or cover crop?

Some basic rules:

- Do not put any lubricant on the soil probe- wash the probe first
- Clean off the soil probe between treatments- for example if you are sampling an alfalfa field clean off the probe before you sample the wheat field.
- Take the soil temperature and record it on the bag at each sampling location, soil temperature helps me to understand the conditions better, but it is not necessary- please give me an idea of the conditions at sampling.
- Always sample in the crop row- to one side of the plant.
 - **Scrape away or remove the duff or residue layer to the side.**
 - If you begin sampling on the eastside of the crop row for example then continue to sample on the east side of all the rows to be consistent
 - Slide a washed soil sampling probe, trowel or spade very near the stem of the plant (1-2 way in corn so you don't cut the prop roots is ok) so you are sampling the roots too.
- Soil samples should be collected to a depth of 6-8 inches or 15-20 cm, because the majority of plant roots are in the top 20 cm of the soil.
- Put the soil and any root fragments in a labeled plastic zip-lock like bag.
- Fill out the sample submission form- and keep on copy for yourself.

Pastures and mixed species cover crops require some special consideration when sampling. It would be good to have a frame, a length of string or "Hula Hoop" that will run at least 2 ft, or a square foot. This way you have a random representative sample of the plant community.

- You need to randomly place the frame, avoid places with cow dung or obvious patches of different fertility (unless you want to compare the microbial community in a previous urine patch with a community not recently subjected to urine).
- **Scrape or remove all the obvious organic matter from the surface of the area you are going to sample.** If you don't you will not get an accurate assessment of your soil mineral nutrient content. The organic carbon contained in your soil is really important and is the driver for soil microbial activity- not the litter, duff, thatch, or surface residue layer on your soil.
- Take 3 samples and put them in a large bag. Then pick 2 other random locations and take 3 samples and put them all in the same bag or clean bucket. Mix the conglomerate sample thoroughly and subsample 250 grams or ½ lb of soil, place in a clean, labeled Ziploc bag.
- Make sure you label the bags with a number or identifier of some kind so the lab can code of your samples after they arrive.
 - Using 1, 2, 3.....etc is fine but you might want to use a separate sheet or a duplicate form to write a description of the sample.

Before you ship your samples to the lab please indicate to forward results to

- Jill@rhizoterra.com or Avril@rhizoterra.com
- Please send us a copy of your submittal form so we know what the samples are and who they belong to: sometimes the labs send us account numbers and no names.

Shipping the samples to the lab of your choice

- There are many number laboratories around the country that will do routine soil analysis- pick one that others have recommended and then sent at least 2 samples that are the same in your group of soil samples and see if the lab gives you the same results- they should be very close. If they are not, call the lab, they should reanalyze the sample for free (unless it was your mistake).
- **If you are sending samples to the USA from another country, you need to find the APHIS form on the website for the lab you are sending the sample to, and follow the instructions for attaching the form to the package.**
- It is best to ship samples on Monday or Tuesday so they arrive before the weekend and can be processed by the lab immediately.

Need more info? Email: info@rhizoterra.com