

The accuracy and representativeness of any analytical data is directly tied to and dependent upon the quality of sample taken. This is true with soil sampling regardless of intended analysis. The following procedure outlines general best practices to ensure quality soil samples are collected for analytical services.

Sample Locations

It is important to consider the source and location of the collected sample so that it represents the end goals of the resulting analytical data. For larger field characterizations, a sample plan should be developed that includes both sample composites and area layout considerations. If the field is uniform (in terms of topography, erosion rate, fertilizer application, etc.) a “zig-zag” or grid layout can be used to collect randomized samples and composites (see figure 1). If the field is not uniform (e.g. contains ridges, ponds, erosion planes, non-uniform fertilizer applications, visually different soil types/colors, etc.), map out the non-uniform regions of the plot and designate them based on their characteristics. These “sub-regions” can then be treated much like individual plots in terms of sampling patterns.

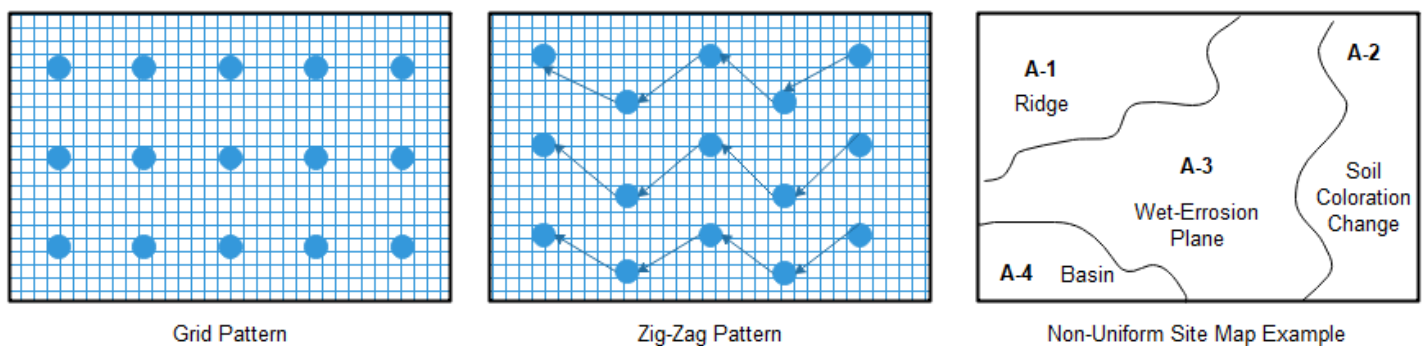


Figure 1 – Site sampling planning examples

Sample Collection

- Wear appropriate PPE including, but not limited to nitrile gloves, eye protection, etc.
- Always use clean sample containers for soil samples – particularly when they are intended for microbial analysis. These containers can be bottles, tubes or zip-lock or whirl-Pak type bags.
- Clean sampling tools such as augers, spades or soil corers. Ensure tools are dry prior to use.
- Typically, a minimum of 10 samples per acre are required, and up to 10 samples can be blended into a composite “sub-sample”.
- Clear the area to be sampled from any surface plant matter and debris.
- Label the sample including date, farm/facility name, sample location (refer to the documented sample plan to identify sample location) and any other relevant information relevant to the sample/process.
- Collect a sample at a depth of 6 inches (not to exceed 8”) collecting roughly 1 pint of sample material.
 - When producing a sub-sample composite, place the sample material in a clean bucket and combine with up to 10 other samples within the sample zone (e.g within one zig-zag route or within a site sub-region). Thoroughly mix the composite before transferring to a clean sample container for shipping.

Sample Shipping

- Do not freeze samples prior or during to shipment.
- Ensure the chain of custody form is filled out and included with the sample package for laboratory use.
- Shipping should be no longer than 2 days with overnight shipping preferred to ensure sample freshness.

Contact at taylor@rimrockanalytical.com with any questions.