

eFields

Ohio State University Extension Sampling Depth for Soil Health Measurements Trial Protocol

Study Overview

The goal of this study is to understand the differences in several soil health lab results when soil cores are collected at various depths. Information from this trial will be used to improve recommendations for soil sample collection to quantify soil health changes under different cropping systems. Three different sampling depths will be compared. Samples will be collected from fields under various management practices that may impact soil health, primarily organic matter.

Treatments and Fields

- Soil cores should be collected at three depths from each sampling location:
 - 0-4" cores
 - 0-6" cores
 - 0-8" cores
- Samples should be collected from fields with various management practices including
 - Long term no-till
 - Conventional tilled
 - Cover cropped (overwintering and winter-killed)
 - Cereal rye
 - Red clover
 - Oat/ Radish mix
 - Organic nutrients (manure)

Sampling Procedure

- Samples should be collected in May or June
- Select the field that you want to quantify soil health
- Collect 10-15 soil cores per depth in a zig-zag or "W" pattern across the sampling area to ensure a representative aggregate sample (See Figure 1 below)
 - Keep samples for each depth in separate buckets
- Mix sample well and transfer to sample bag
- Label sample bag with field ID

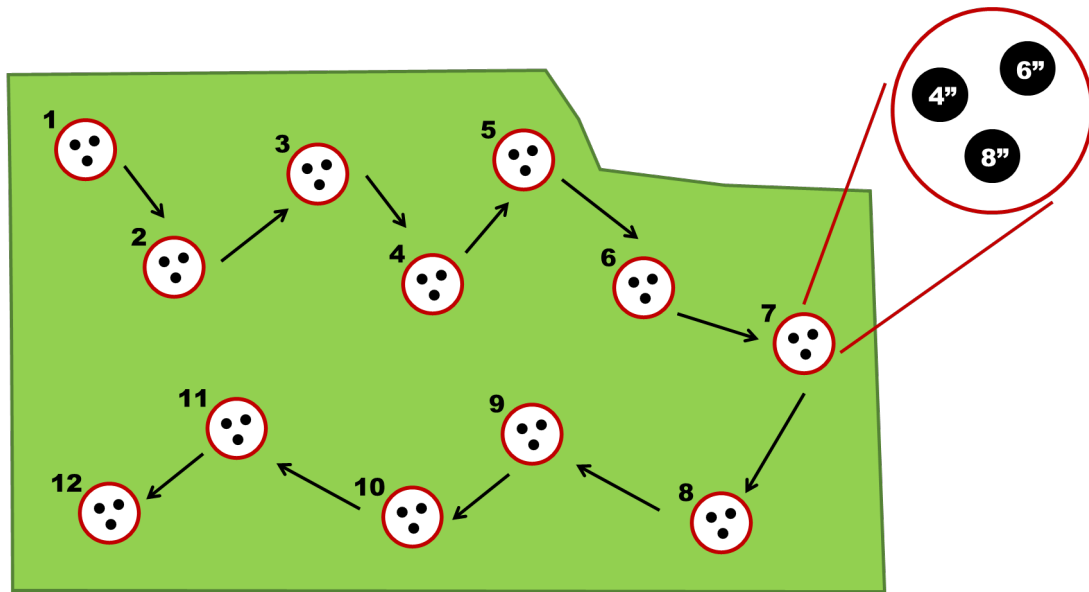


Figure 1. Example of sampling path for a field with 12 samples. Three cores (0-4", 0-6", and 0-8") should be pulled at each sample location.

Sample Submission

To send samples to the Culman soil lab:

1. Please put a copy of the field plot map in the box to return to Wooster and keep one for your records.
2. Ship soil immediately to: Bethany Herman (eFields Soil Health), 1680 Madison Ave, Wooster OH, 44691. Do not ship on Friday or soil will sit in warehouse over the weekend. If sampled on Thursday or Friday store soil in refrigerator.
3. When samples arrive in Wooster, we will process them.