

## Soil Sampling Instructions: Treat all samples equally

You will sample in the same place, at the same time, each subsequent year.

1. **Cautiously Choose:** Select your sample site, which has a uniform soil type, management history and production. Feedlots, compost piles, fences, roads, depressions, areas with high salinity, or very wet areas should be avoided. If sampling from orchard or row-cropping systems, all samples should be from the same uniform area that you most want to understand: i.e. rows versus inter-row areas.
  2. **Diligently Document:** (on provided paperwork)
    - a. Give your site a name and note its GPS coordinates.
    - b. Record your soil temperature at 4" depth: (May T>55°F; Sept/Oct. T>50°F) Kitchen thermometers are OK.
    - c. Take a photo of the sample area. Email the site photo to Elizabeth@ElizabethBlackArt.com.
    - d. Note precipitation or irrigation events on site within the last week. If drought, note that too.
    - e. Document your current or past crop, soil amendments and tillage at the sampling site.
    - f. If you want free fertilizing recommendations, note what your future crop will be and what your yield goals are.
  3. **Carefully Collect:** Scrape away duff, vegetation, or crop residue on top of soil before sampling, to expose bare mineral soil, without disturbing the soil surface. Take 10-15 8-inch-deep soil cores in a randomized pattern within the sampling area with the provided or comparable soil probe, next to the plants or near the rooting structures. DO NOT use any form of lubricants on the soil probe. Combine all cores from the sample area in the provided labeled zip lock freezer bag. Mix the sample thoroughly and remove any rocks. You need just 2 cups of soil.
  4. **NEW DESCRIPTIVE WORD SECTION:** Circle all the words that you think best describe your soil sample. If you don't know what a word means, just ignore it and don't circle it.
  5. **Sensibly Store:** Freeze sample within 1 hour of collection. If you can't freeze within an hour, put it in a cooler immediately and keep cool and dark, until it can be frozen.
  6. **Message Me:** Phone Elizabeth Black at 303-449-7532h or text 720-839-5576c to arrange pick-up of sample(s).
- If you want to sample more than one area,** you can buy additional discounted Haney and/or PLFA tests. If you want to compare 2 different areas, collect all of your samples for comparison on the same day. If that's not possible, sample the 2 within one week or less. This reduces the chance of moisture or temperature fluctuations between sampling times.

### Your test results can be influenced by the following things:

1. **Your soil type (clay, loam, sand);** Front Range soils vary widely. Your native soil type and pH effect how high you can potentially raise your soil health score. That is why you are only being compared with yourself and NOT other growers.
2. **Soil temperature:** Soil microbes are fairly dormant in the winter, then start growing and multiplying in the spring as soil temps increase. Different kinds of microbes peak at different points during the growing season, and then slowly taper off at the end of the growing season. This is why we ask you to check that your soil temperature is >55°F for May sampling and > 50°F for September/October sampling. It is also why we ask that you sample your soil at the same time each succeeding year, so you are not comparing apples and oranges.
3. **Wet saturated soil or prolonged drought:** If your soil is very muddy and saturated from rain or irrigation, wait to sample, until it is drained and just moist. If it is experiencing significant drought, wait until after rain or irrigation if possible. If not, note that soil is experiencing drought when sampled.
4. **Fertilizer and soil amendment applications (mulch/compost/cover-crop/manure):** Sample either before any applications, or wait at least 6 weeks after application to sample. A light application of compost tea can be sampled after a couple weeks.
5. **Tillage:** Tilling disrupts soil microbial communities, causing some populations to spike up quickly, and others to crash. Sample either before tillage, or at least 6 weeks after last tillage.
6. **Pesticides and herbicide applications:** The verdict is still out here. To be on the safe side, wait at least 2 weeks after application before sampling.
7. **How you store your sample:** Try to keep your sample near or below the SOIL TEMPERATURE at which it was taken. Try to get your sample on ice in a dark location if sampling during hot periods. Heat can destroy fatty acids much more than cold, so freezing samples as soon as possible is best.