

Soil Content Analysis - Sample Collection Instructions

Sampling your soil is not necessarily hard, but it can be time consuming to do it correctly. You will need a clean bucket, and a sampling probe or tube, auger, trowel, or shovel. If you can get them in plastic, all the better. (In some circles, it is thought that metal tools may influence the outcome of the testing process by sensitive equipment- however, most do not think it represents a significant influence.)

The bottom line is that **the better the sampling technique, the more reliable the data from your soil test will be.** Your sample must represent the entire area you will eventually be fertilizing. In general, you should sample an area you expect to fertilize as a unit. So, one sample for a vegetable patch, another for a flower garden; one for each commercial production field and another for an orchard or golf green.

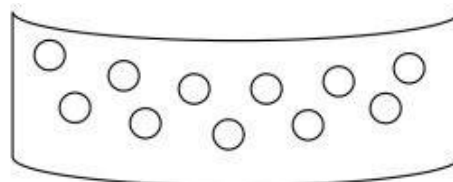
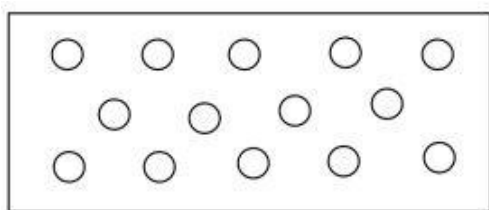
In addition, there are two ways to look at sampling:

1. Sample an entire area that contains the same crop that will all be fertilized in the same way (one composite sample)
2. Sample an area for a "trouble spot" within an area that contains all the same crop and will be fertilized in the same way (two composite samples - one of the troubled area and one of the area that is doing well).

We recommend using the technique that makes the most sense for your situation.

The Sampling Process

A *composite sample* is one that is made up of samples from different zones in the area you are sampling that are then all mixed together. A representative sample is taken from this mix to send to the lab. The diagram below represents a good pattern to follow when taking a composite sample on a fairly-large square or rectangular field and on a contoured field. In general, dig, probe, or auger 4 to 6 locations in a smaller area (up to 10,000 square feet in size) or 11 to 14 locations for a larger garden or field (over 10,000 square feet). Use a zigzag pattern such as the one seen in the examples below.



Contoured field

- For cultivated gardens & crops, samples are taken in the tillage zone — 6-10 inches deep.
- For no-till or minimum till, take two samples — one at 0-1 inches deep and another at 6-10 inches deep for each location.
- For fruit crops and trees, take two samples should be taken. One from 1-8 inches deep and one from 8-16 inches deep, which is called the subsoil layer.
- For lawns, turf, and pastures, a sample taken from 0-8 inches will work, but remove all the grass, thatch, & other plant matter located on the top of the sample (ground level).

Please note: When using a shovel, dig a wedge of soil to the required sampling depth; set aside to be replaced after sample is taken. Cut a 1/2 inch slice from the face of the hole and trim the sides with a knife so you have a vertical slice of soil (narrow and long) as the sample. Repeat in all locations.

Best Practices To Follow:

- Avoid sampling from unusual areas like areas where lime or fertilizer has been spilled or piled that are not representative of the whole area
- In early spring, take samples before fertilizers, amendments, or manure are added to get a baseline
- Before taking the composite sample that will go to the lab, mix all soil samples in the bucket well
- Collect samples from fruit trees just inside the drip line of the canopy
- If not an orchard, do not take samples near trees or under tree canopies
- Take samples at least 656 feet (200 meters) from roads where cars are passing (northern tier states, especially because of the application of salt to roads during winter)
- Take samples at least 65.6 feet (20 meters) from bodies of water
- Do not take samples on visibly contaminated areas or where piles or bags of nutrients, compost, or fertilizer are placed
- Avoid taking a soil sample when conditions are extremely wet unless absolutely necessary
- Generally, soil tests for most crops are done every 2-3 years, but situations that involve intensively cultivated or high value crops may require annual testing; when determining the effects of adding amendments, supplements, or changing fertilizers, it is recommended that, at a minimum, 2 tests be done per growing season — a baseline test, and end-of-season test
- Sampling from any given area should be done around the same time as it was done in previous years
- It is best to make a map of how the area was sampled and keep it on file each time it is sampled - **remember, the best growers are the best record keepers**

Sample Preparation

1. Mix all the soil in the bucket well. Take 2 cups and place in a plastic bag to send to the lab.
2. Mark the bag with the name and date. Please clearly hand-print on bag with a permanent marker or staple a piece of paper with printed information to the bag
3. Put bag in a cardboard box with your Lab Testing Information Sheet and deliver or mail to the address below:

Please ship or drop off samples, along with a completed Lab Testing Information Sheet, to:

KALIX Commercial Plant Nutrition
1574 Sky Park Dr.
Medford, OR 97504

***** DON'T FORGET TO INCLUDE YOUR LAB TESTING INFORMATION SHEET! *****

Please Note: If more accurate nitrogen data is desired, mailed soil samples should be sent in a refrigerated package with dry ice-type cold pack or similar cooling mechanism. DO NOT FREEZE SAMPLE. Use overnight shipping methods and send within 24 hours of sample(s) being taken. Nitrogen very quickly converts into other forms if soil is left to sit without refrigeration. Microbes consume them, they convert to ammonium, etc.