

Bodenwohl Sampling Protocol

General Guidelines

Please read first! If you have any questions, please do not hesitate to contact me.



- Samples should be collected and shipped on the same day to protect sensitive soil organisms.
- Solid samples (i.e. compost or soil) should be collected under naturally moist conditions especially if samples are from bare soil without mulch or plant cover.
- Samples should be placed in a container with a screw cap. The container must be unbreakable and thoroughly clean.
- A pressure seal bag may also be used for solid samples. Bags should not be filled more than halfway. If the amount of sample material is too large, please mix it thoroughly in a sterile container first. Then fill the bag halfway from this amount with a sterile spoon. Solid samples should be at least 150g. When sealing bags of samples, leave some air in the bag so that the organisms remain alive during shipment. Then pack the sample tightly in a shipping box (not an envelope) to prevent air release during shipping.
- For liquid samples, the container should be 100 ml to 150 ml.
- Samples should be marked on the outside with your name, location, and the type of sample being tested on a label or simply with a sharpie. Do not under any circumstances place a label or other paper with the sample bags as this will alter the biology of the sample. For soil samples from wider areas, please see labeling guidelines below.
- Samples should be kept cool (not frozen) and protected from sun, wind, rain, and temperature extremes before shipping.
- One-day mailings are ideal. A two-day shipment is still possible, but analysis will be less accurate due to changes in soil chemistry and biology over time.

Liquid Samples (Teas and Extracts)

- Fill the 100 ml to 150 ml container 1/3 full with the liquid to be analyzed. The empty 2/3 is important for air exchange.
- Before shipping, please wrap a piece of tape or gaffer tape around the tightly closed screw cap of the container and place it in a plastic bag.

Compost Samples

- From a small compost pile, take 1 teaspoon (approximately 4 g or 4 ml) from at least 5 different locations.
- From a large compost pile, take 1 teaspoon from 20 different locations.

- Take teaspoons from different locations and depths within the pile to ensure the sample is representative of the entire pile.

Soil Samples

- You will need a coring tool - an apple corer works fine - and a bag or container at least 250 ml in size (see general guidelines above).
- Remove organic surface material, if present, in an approximately 3 cm circle around the sampling site.
- Rotate the coring tool straight down, pull out the material, and place it in the clean bag or container until the core is approximately 7 cm deep.
- You will usually need at least 3 cores for a representative sample of a particular soil condition. You will usually need to mix these together before placing a smaller amount (about 100 ml) in the container suitable for shipping. Please read the general guidelines for this above.
- Fill the bag or container to be tested only halfway.
- For soil samples around a plant or group of plants, note:
 - » Remove organic surface material, if present.
 - » Take at least 3 soil core samples along the centerline between the plant stem and the drip line (the outer, drooping leaves) and mix together.



Soil Samples from Larger Areas

When soil biology is to be studied over broad land types such as fields, pastures, lawns, garden beds, etc., it is usually one of two scenarios:

Scenario A: Different conditions are present in the same field that require it to be classified by defining characteristics. For example:

- Healthy crops
 - Weed patches
 - Diseased crops
 - Bare patches
 - Ridge lines
 - Swales
- Draw an index of the features to be analyzed on a map or sheet of paper.
 - Give each feature zone an identifier, e.g., GF (Healthy Crops), UF (Weed Patches), etc.
 - Take 3 cores in each zone and mix them into a sample following the protocol generally laid out above. Then place each sample in its own bag or container.
 - To truly assess a field, at least 40% of each zone type should be sampled for a representative data set. This means taking 3 samples from 40% of the area of each zone.

- Each sample is then labeled with both the zone feature identifier (GF, UF, etc.) and your name, location, and sample type. Please read the general labeling guidelines above!
- If you wish to have more than one sample from the same feature zone examined, the samples will be additionally numbered, e.g. GF1, GF2, etc., and this numbering will be transferred to the card.



Scenario B: The field is bare and without plant growth, e.g., a recently tilled field. For each field:

- Take 3 to 4 cores per hectare from 12 to 15 areas, i.e. 36-60 cores in total.
- Cores should be taken randomly and well distributed throughout the area.
- Avoid edges, depressions, ridges, or other land features that are not representative.
- Mark core sample locations on a map for future reference.
- Mix all core samples thoroughly but gently in the same clean container, a small amount of which you will add to your shipping bag or container. Follow the general guidelines laid out above.
- Label the sample according to the general guidelines.