

Unveiling the Secret Beneath Your Garden. Don't Guess – Soil Test.

By John Kaskewsky

Erie County Master Gardener

As a home gardener, do you know that the key to flourishing plants lies beneath the surface? Soil, often overlooked but vital to plant health, holds the secrets to a successful garden. Soil sampling is an essential practice for home gardeners and horticultural enthusiasts, to unlock the potential of their soil. In this article, we'll delve into the why and how of soil sampling, equipping you with the knowledge to nurture your garden to its fullest potential.

Why Soil Sampling Matters: Soil sampling is about understanding the unique characteristics of your soil and tailoring your gardening practices accordingly. By analyzing soil samples, you gain insights into important factors such as nutrient levels, pH balance, and organic matter, which directly impact plant growth and vitality. Armed with this knowledge, you can make informed decisions about fertilization, soil amendments, and plant selection, setting the stage for a healthy and productive garden.

How to Get Started Soil Sampling: The process of soil sampling may seem daunting at first, but getting started is easier than you think. Following these simple steps will ensure success.

1. Secure a soil sample kit. I purchased mine at the local OSU Extension Service in town for \$10.00. The samples are sent by you to the Penn State - Agricultural Analytical Services Laboratory. Results can be requested by e-mail or paper copy. In addition, a copy of the results is sent to the Erie County Extension Office if you have questions. (Michigan State has a good program as well.) Attached is the link to Penn State: <https://agsci.psu.edu/aasl/soil-testing>. You will be asked to select the appropriate code within the instructions such a garden/ flower bed or a lawn.
2. Choose your sampling sites: Select representative areas within your garden or lawn. Do not mix samples from the various sampling sites (lawns vs. garden beds) to avoid cross-contamination of your samples. Each sampling area will need a separate soil analysis to be most beneficial.
3. Gather Your Samples: Your soil test kit will provide specific instructions for the number of samples and method of sampling. Following the instructions in your soil kit, use a clean trowel or soil probe to collect the samples from each desired area to be sampled. Dig 6 to 8 inches deep for garden and landscape beds and 3 to 4 inches deep for lawns. In a clean container, mix together the samples from each sampling area thoroughly removing roots, thatch, rocks, and clumps.
4. Label and Package Your Samples: Label each sample with its corresponding location.
5. Submit Your Samples for Analysis: The analysis takes approximately 10 business days to receive the results.

Interpreting Your Soil Test Results: Once you receive your soil test results, pay close attention to key parameters such as pH, nutrient levels, and organic matter content and the specific recommendations to improve your soil, as these will guide your soil management decisions. Here are some common recommendations based on soil test results:

- Amendment of pH: If your soil pH is too acidic or alkaline, consider applying lime (to raise pH) to sulfur (to lower pH) to bring in the optimal range of 6.5 to 7 for most plants. Recommendations are typically for application rates of “X” lbs. / 100 square feet.
- Nutrient Management: Use your soil test recommendations to determine the appropriate type and amount of fertilizer or amendments to apply. Fertilizers are typically marketed as having a percentage by weight of nitrogen, phosphate, and potassium. A 10-10-10 fertilizer has 1 lb. of nitrogen, phosphate, and potassium per 10 lbs. of fertilizer.
- Soil Amendments: This is often an additional fee to get recommendations for the incorporation of organic matter such as compost, aged manure, or shredded leaves to improve soil structure and water retention.
- Plant Selection: Choose plant varieties that are well-suited to your soil conditions. Some plants like blueberries thrive in acidic soils while others such as spinach prefer alkaline or neutral soils.

Soil sampling is not a one-time task, but rather an ongoing practice that evolves with your garden. The general recommendation is to sample your soil areas every two to three years in the same season each time you sample. Early spring and late fall are the best sampling times. Regularly monitor your soil health and adjust your gardening practices as needed to ensure optimal growing conditions. By investing time and effort in soil sampling, you’ll reap the rewards of a vibrant garden.

Erie County Master Gardener Events:

- Scholarships application due April 15. <http://go.osu.edu/CkYK>
- Earth Day at Osborn Park, April 20.
- MVG Plant Sale at the Erie County Fair Grounds – May 11.
- Interested in becoming a Master Gardener? A New Class forming this September. (<https://erie.osu.edu/program-areas/master-gardener-volunteers/master-gardener-training-information>)