

## Reasons for Soil Sampling

- Reduce nitrogen and phosphorus loss to local streams and waterways
- Reduces the amount of money spent on fertilizers
- Accurately test the soil for needed nutrients, which decreases the occurrence of over application of fertilizer
- Improve soil quality
- Check soil pH. Plants will absorb nutrients at levels between 6-7 which increases plant growth.



## Ways to save money and improve the environment!

- Leave grass clippings (they are an excellent source of nutrients)
- Do not spread fertilizer on sidewalks or driveways
- Apply only what you need. Over application is not only a waste of money, but affects the environment negatively.
- Calibrate fertilizer spreaders, to ensure an adequate and even application. If possible use a drop spreader for greater accuracy.

## Reference Materials

The following resources provide good information on lawn care and fertilizer requirements.

### Ohio State University Fact sheets:

<http://ohioline.osu.edu/>

- *Interpreting a Soil Test for Lawns-HYG-4028*
- *Soil Testing is an Excellent Investment for Garden Plant and Commercial Crops HYG-1132-99*
- *Lawn Care Plans: CDFS-130-93*
- *Fertilization of Lawns: HYG-4006*

### Michigan State University, Extension Bulletins:

- *Sampling Soils for Fertilizer and Lime Recommendations– Bulletin E498*
- *MSU Extension Soil Web Pages for Consumers*  
<http://web1.msue.msu.edu/monroe/soilweb2/index.htm>
- *MSU Department of Crop and Soil Sciences*  
<http://www.css.msu.edu/SoilTesting.cfm>

### **Darke Soil and Water Conservation District** **Stillwater Watershed Project**

1117 South Towne Court  
Greenville, Ohio 45331

Phone: 937-548-1715 ext 3  
Fax: 937-548-2925

E-mail: [greg.mcglinch@oh.nacdnet.net](mailto:greg.mcglinch@oh.nacdnet.net)  
[www.stillwatershed.org](http://www.stillwatershed.org)



## Soil Sampling: A how to guide and its impact on the environment



- **Darke Soil and Water Conservation District**
  - **Stillwater Watershed Project**
- Telephone 937-548-1715 ext 3

## Importance of Managing Nitrogen and Phosphorus in Soils.

- **Nitrogen, Phosphorus, and Potassium (N, P, & K) are 3 essential nutrients for plant growth and development.**
- **Nitrogen and Phosphorus can be detrimental to the environment in a variety of ways**
  1. **Increased levels of nitrogen (nitrates and nitrites) can contaminate groundwater.**
  2. **Increased levels of N and P can increase eutrophication in lakes and streams which decreases the available oxygen for aquatic life.**



Algae growth occurs with increased N & P which reduces oxygen levels.

## When to Soil Sample

- **Generally taken during the spring and fall seasons**
- **Conduct soil sampling every 2-3 years**

## How to Conduct Soil Sampling

**Step 1:** You must know the proper sampling depth. For established lawns 2-4 inches below the turf is a sufficient sample

**F.Y.I**  
The Darke SWCD will provide soil probes for residents to use in taking their soil samples.



**Step 2:** Using a soil probe, spade, shovel, or trowel remove 2-4 inches of soil from below the turf. Be sure to remove any grass clippings or rocks from the soil sample.

**Step 3:** Place the soil sample in a plastic bucket. Do not use any detergents or cleaners to clean out the bucket, this can skew the soil results.

**Step 4:** Conduct 15-20 sub-samples of soil in a random fashion to make you get a representative soil sample of your lawn. If you have a large lawn take more sub-samples to get a better representation of your lawns fertility.

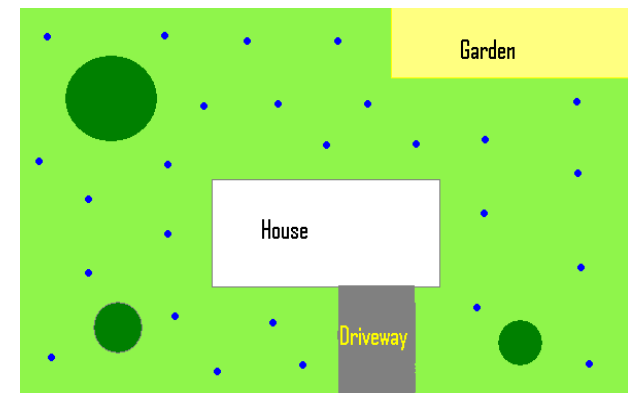
- Utilize the zigzag method to get a more random and uniform soil sample (refer to image on right-hand side)

**Step 5:** During the sampling place all of the sub samples in the bucket and when completed, thoroughly mix the soil together. Break up clumps and allow the soil to dry for a day.

**Step 6:** Place 2 cups of soil into a Ziploc bag and fill out the Michigan State University soil sample sheet. Drop these 2 items off at the Darke SWCD office 1117 South Towne Court, Greenville, OH 45331 to be sent in for testing.

**Step 7:** Recommendations will be sent to your home with information on how to calculate appropriate fertilization.

**Remember soil sampling Saves Money and the Environment!**



Blue dots represent a zigzag pattern to take a uniform and representative soil sampling of a lawn