How to Sample - Lawn & Garden

Soil tests can be no better than the sample. Therefore, proper collection of the soil sample is extremely important. To obtain a good soil sample, follow the directions below.

**When**

Soil samples may be taken at any time during the year when soil conditions permit. It usually takes the Laboratory three to five days to process your samples.

**Where**

If the area is fairly level and the soil appears to be uniform, collect a composite (mixed) sample.

If your lawn or garden has large areas which differ in fertility, take one sample from each area. For example, you may want to sample the front lawn and the back lawn separately (see diagram below).
Do not include soil from the lawn area and a garden in the same composite sample. Sample separately or avoid trouble spots or small areas such as borders, low spots, near trees or buildings, etc.

**How**

Use a garden trowel, spade, sampling tube, or soil auger. Scrape away or discard any surface mat of grass or litter. Sample the lawn or garden area to the sampling depth indicated below.

- existing grass – sample 0-3"
- new grass – sample 0-6"
- gardens – sample 0-6"
- trees/shrubs – sample 0-12"
- lead test – sample only surface 3/4"

Place the soil sample in a clean bucket or pan. Repeat sampling in five (5) scattered spots within the chosen area. Mix soil well to make a composite sample and send in about a pint of the sample to the Laboratory. Any clean and spill-proof container may be used.

Label the sample container with your name, address, and YOUR sample identification (FOUR digits). Keep a record for yourself of the area represented by the sample.
Send this information sheet with ONE (1) soil sample

**MAIL SOIL TEST REPORT TO:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Soil Location: County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>City, State, Zip</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td>Check for $ ____________ enclosed</td>
</tr>
</tbody>
</table>

Please provide a name for this sample, consisting of no more than 4 numbers and/or letters. Indicate this name on the sample container and record it here.

**Fertilizer Recommendations Requested for:**

<table>
<thead>
<tr>
<th>Lawn</th>
<th>Fruit</th>
<th>For Grass Only</th>
<th>Check Tests Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ (101) Before seeding or sodding</td>
<td>□ (112) Tree Fruits</td>
<td>Is grass watered regularly?</td>
<td></td>
</tr>
<tr>
<td>□ (102) Existing lawn</td>
<td>□ (113) Small Fruits</td>
<td>□ Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ (114) Blueberries</td>
<td>□ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are clippings removed?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Yes</td>
<td></td>
</tr>
<tr>
<td>gardens</td>
<td></td>
<td>□ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(check only one)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(110) Vegetable Garden</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(115) Broadleaf</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(111) Flower Garden</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(116) Evergreen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(117) Azalea &amp; Rhododendron</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The report you receive will use this name to identify your sample.

Tests provided by the University of Minnesota Soil Testing Laboratory are intended to aid in evaluating the fertility status and chemical condition of your soil. Based on these test results and the type of plants to be grown, you will receive fertilizer recommendations calculated to provide adequate levels of phosphorus and potassium for healthy plant growth, without adversely affecting the environment.

Problems with plants may be caused by factors other than soil fertility, e.g., disease, insects, insufficient light, soil moisture or compaction, or climatic conditions. An evaluation of soil fertility and pH is an important first step in diagnosing problems. If soil fertility is not found to be a problem, the other factors affecting plant growth should be evaluated to determine possible causes. Your County Extension Educator or Master Gardener can help if you need more information to diagnose your problem.

Because nitrogen is extremely mobile in soils, nitrogen recommendations are based on plant requirements and soil organic matter levels as determined by the laboratory.

*Trace element tests are generally not recommended for lawn and garden samples. Research has shown that most soils in Minnesota contain adequate levels for plant growth. Trace element tests may be useful to some lawn care professionals dealing with special problems.

See next page or reverse side of this form for soil sampling information and mailing instructions.
HOW TO TAKE A SOIL SAMPLE

The quality of your results depends largely on the quality of your sample. To obtain a good soil sample, follow the directions below.

WHEN

Soil samples may be collected whenever soil conditions permit. When submitting your samples to the laboratory, check our website (soiltest.cfans.umn.edu/) for current turnaround times and more information.

WHERE

- If the area is fairly level and the soil appears to be uniform, collect one composite (mixed) sample.
- If your lawn or garden has large areas which differ in fertility, take one sample from each area. For example, you may want to sample the front lawn and the back lawn separately (see diagram).
- Area of special concern (under trees, near buildings, trouble spots) should be represented by separate samples.

HOW

Use a garden trowel, spade, sampling tube or soil auger. **Scrape away or discard any surface mat of grass or litter.** Sample the lawn or garden area to the sampling depth indicated below:

1) existing grass - sample 0-3”
2) new grass - sample 0-6”
3) gardens - sample 0-6”
4) trees and shrubs - 0-12”
5) lead test - see "Lead Test" section

- Place the soil sample in a clean bucket or pan.

- Repeat sampling in several random locations within the chosen area. Mix soil well to make ONE composite sample for the entire area, and send or bring **2-3 CUPS** of the composite sample to the lab. Use a clean, leak-proof container (e.g. disposable food storage bag or tub) and place the container inside a sturdy mailer or shipping package. Please keep your paperwork outside of the soil container, but DO place the form(s) and payment inside the sealed mailer or shipping package.

- Label the sample container with your name, address and sample identification (max = 4 characters). Fill out the other side of this form completely, and **keep a record of your sample identification**.

**Soluble salts test:** This test should be requested if:
1) “black dirt” has been hauled in and poor growth is observed, 2) there is possible damage from salt used on streets and sidewalks, or excess application of fertilizer, 3) the grass looks burned even when adequate water is present, 4) the soil is poorly drained and located in the south central or western part of the state.

**Lead Test:** Select only if lead contamination is suspected. Sample only the surface 3/4” for play areas, and surface to 3-4” for gardens. **Separate sample required.**

HOW TO SUBMIT SAMPLES

Soil samples may be delivered in person to Room 135 Crops Research Building, University of Minnesota (see map below), or mail to:

Soil Testing and Research Analytical Laboratory
University of Minnesota Hours: Mon-Fri 8:00am - 4:30pm
135 Crops Research Building Website: http://soiltest.cfans.umn.edu/
1902 Dudley Avenue Phone: (612) 625-3101
St. Paul, MN 55108

Enclose form and full payment for each sample to be tested. You may send one check to cover the cost of multiple samples. Make checks payable to the University of Minnesota. **Do not send cash.** The University of Minnesota will not be responsible for cash sent through the mail. The sender pays postage.

[Map of State Fair Grounds showing the location of SOIL TESTING LAB]
How to read a soil test

Sample/Field Number: DMC2

SOIL TEST RESULTS

<table>
<thead>
<tr>
<th>Soluble Salts ppm</th>
<th>pH</th>
<th>Phosphorus (P) ppm</th>
<th>Potassium (K) ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>7.6</td>
<td>PPPP</td>
<td>KKKKKKKKKKKKKKKKKK</td>
</tr>
<tr>
<td>ppm</td>
<td></td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>V. High</td>
</tr>
<tr>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>25</td>
<td>75</td>
<td>125</td>
<td>175</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>V. High</td>
</tr>
</tbody>
</table>

INTERPRETATION OF SOIL TEST RESULTS

Interpreted:
- Phosphorus (P): Low
- Potassium (K): V. High

RECOMMENDATIONS FOR: Schools/Industrial Grounds
- Grass not watered
- Clippings not removed

LINE RECOMMENDATION:
- NITROGEN: 0.5 LBS/1,000 SQ.FT.
- 25 LBS/ACRE
- PHOSPHATE: 1 LBS/1,000 SQ.FT.
- 45 LBS/ACRE
- POTASH: 0 LBS/1,000 SQ.FT.
- 0 LBS/ACRE

THE APPROXIMATE RATIO OR PROPORTION OF THESE NUTRIENTS IS: 10-20-0

Use a fertilizer with the percentage of nutrients closest to the above ratio. Apply according to the instructions on the fertilizer bag or container, or determine the amount required from the instructions given on the back side of this report. Since meeting the exact amount required for each nutrient will not be possible in most cases, it is more important to apply the amount of nitrogen required and compromise some for phosphate and potash.

-Apply the total amount recommended above at one time in early September.

*CAUTION! Do not apply more than 1 lb. nitrogen per 1000 sq. ft. in one application to avoid burning the grass, unless a slow release form or organic fertilizer is used. It is recommended that up to 50 percent of the nitrogen be of the slow release form.

Grass clippings left on the lawn is a sound practice. They recycle nutrients and conserve moisture. The above recommendations reflect this contribution.

County: NICOLLET. For additional information, contact the YARD & GARDEN LINE: Phone: 612-624-4771 Website: www.extension.umn.edu/yardandgarden