

Soil Test Frequently Asked Questions:

Q: How do I know how much fertilizer to use when looking at the bar graph?

A: Read the information below the bar graph under the heading “Recommendations”. Fertilizer and lime recommendations are customized to your soil sample based on the lab results reported in the bar graph.

Q: Why is Nitrogen not shown on the bar graph of the soil test report?

A: Nitrogen recommendations are not based on a soil analysis per se. This is due to the many climatic, chemical and biological factors that influence the amount of nitrogen present in a soil at any given time. Instead of a soil analysis, nitrogen recommendations are based on research results from field experiments to determine the best application rate to attain optimum growing conditions for selected crops. All soil test reports provide standardized nitrogen recommendations based on current research.

Q: I submitted a soil sample for a lawn or pasture, but the results provide two completely different recommendations. Which recommendation should I use?

A: These recommendations are broken down into two categories for “Establishment” and for “Maintenance” as noted in bold print at the bottom of the report. You should follow the for “Establishment” recommendation only if you are putting down new grass seed or sod. This fertilization program should be followed only for the first year of establishment. For lawns or pastures that are already established, you should follow the for “Maintenance” fertilizer recommendations.

Q: I can't find the exact fertilizer recommended at any local garden store. What can I use as a substitute on my lawn?

A: The soil test recommendations are guidelines, not absolute quantities. If you cannot find a fertilizer grade that matches the recommended ratio, use the fertilizer grade that is closest to that ratio. See the following online publication “The Basics of Turfgrass Fertilization”: <http://www.ugaextension.com/cherokee/anr/documents/TheBasics.pdf>

Q: I want to use an organic source of fertilizer instead of synthetic fertilizers. How do I convert the soil test recommendations to organic?

A: See the following online publication “How to Convert an Inorganic Fertilizer Recommendation to an Organic One”:
<http://pubs.caes.uga.edu/caespubs/pubcd/C853/C853.htm>

Q: I can't open the soil test report attached to this email. What should I do?

A: Acrobat Reader software must be installed on your computer to read our (.pdf) files. If you are unable to open this document, you can download the Adobe Reader software for free online at <http://get.adobe.com/reader/>

Q: What Nutrients do Plants Need?

A: Out of the 18 nutrients known to be essential for plant growth, there are only three that are most often lacking in soils. These three nutrients are **nitrogen**, **phosphorus**, and **potassium**, and every fertilizer product sold is required to have a guaranteed analysis of

these nutrients in that order. The three numbers on the bag represent what percent of the total bag weight contains these nutrients. For example, a 10-10-10 fertilizer contains 10% of each nutrient by bag weight. So what's in the rest of the bag? The remaining percentage is "filler" which enables you to apply the fertilizer evenly over a large area. Each of these nutrients may be needed in different amounts depending on the types of plants you are growing and how your soil has been treated previously. Of all the nutrients, nitrogen is the most limited and mobile in soils and must be reapplied annually.

Q: Why do plants need these nutrients?

A: The "up, down, all-around" catch phrase is a simple way to remember why plants need nitrogen, phosphorus, and potassium. Very simply, the nitrogen in fertilizers makes plants grow "up" with new leaves, shoot growth, and turning their leaves green. Phosphorus makes plant roots grow "down" and is important in establishing new plants or seeds. Phosphorus also improves the quality of flowers, fruits and vegetables. Potassium is an "all-around" important nutrient for plant growth, fruit development, and resistance to diseases and other plant stresses.

Q: Which Fertilizer do I Use?

A: The easiest way to determine which nutrients your soil is lacking is by taking a soil sample for testing. Soil tests provide recommendations on the fertilizers needed for ideal plant growth. Soil tests also determine your soil pH and how much lime to apply, if any is needed. Maintaining your soil pH is critical to making sure that the fertilizer you apply can actually be taken up by plants' roots, otherwise you are wasting your time and money on fertilizer! Applying the correct amount also protects the environment from being polluted by excess nutrients. Soil tests should be done once a year for the first few years after planting anything new. Once you have a couple of test results to compare from year to year, you can more easily predict future fertilizer needs based on your soil type. Go to www.soiltest123.com for more information about soil testing or contact your local Extension office at 1-800-ASK-UGA1.

Q: Is more fertilizer better?

A: All fertilizer applications should be based on the amount of nitrogen applied since this is the most important nutrient. Nitrogen is also the easiest nutrient to misapply and excess nitrogen will increase over-growth, water demand, and plant susceptibility to insects and diseases. A good rule to follow is to never apply more than 1 pound of nitrogen per 1,000 square feet at any one application. To quickly determine this maximum rate, all you have to do is divide 100 by the first number on the fertilizer bag (percent nitrogen). The result is the number of pounds of that product you'll need to supply 1 pound of actual nitrogen per 1,000 square feet. For example, if you are using a 12-4-8 fertilizer, then divide $100/12 = 8.3$ pounds. Therefore, 8.3 pounds of 12-4-8 fertilizer would provide exactly 1 pound of actual nitrogen over an area of 1,000 square feet.