

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 based on the soil test results. For vegetable gardens, we encourage splitting the fertilizer recommended into two or three applications during the growing season. Apply one-third to one-half of the fertilizer at planting and the remaining amounts three to four weeks apart.

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

A: Nitrogen recommendations are not based on a routine soil analysis. 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 annual 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:

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 should I use?

A: The easiest way to determine which nutrient is deficient in your soil is to have a soil test done. The soil test will tell you the levels of nitrogen, phosphorus, and potassium in your soil. If the levels are low, you can apply a fertilizer that contains these nutrients. If the levels are high, you may not need to apply fertilizer. The soil test will also tell you the pH of your soil. If the pH is too low (acidic), you may need to add lime to raise it. If the pH is too high (alkaline), you may need to add sulfur to lower it. The soil test will also tell you the amount of organic matter in your soil. If the amount is low, you may need to add compost or other organic matter to improve the soil structure and fertility.

