

# Soil Test To Get The Most For Your Fertilizer Dollars

**PINE BLUFF, ARK.**

**W**ith the high cost of fertilizer and challenging economic times, a soil test before planting should be at the top of every gardener's "to-do" list, says Dr. Obadiah Njue, Extension horticulture specialist with the University of Arkansas at Pine Bluff Cooperative Extension Program.

Armed with soil test results, you may be able to reduce or eliminate fertilizer use. Soil test results show the amount of nutrients required for optimum plant growth and yield potential of various crops thus providing for the most efficient use of fertilizers and maximizing fertilizer dollars. Too much fertilizer wastes nutrients and poses a threat to the environment.

Soil testing also provides an estimate of the quantity of nutrients available to the plants during the growing season. It shows the levels of phosphorus, potassium, pH (a measure of soil acidity that affects plants' uptake of nutrients) and organic carbon. These measures change little throughout the year. In contrast, nitrogen levels can change if there is a significant rainfall or irrigation which explains why split applications of nitrogen are sometimes necessary during the growing season, says Dr. Njue.

Additional benefits of soil testing include:

- Identifies nutrients lacking in the soil
- Maximizes fertilizer efficiency
- Provides information on proper balance of plant nutrients that results in optimum plant growth
- Allows for adjustment of soil pH to optimum levels which improves availability of nutrients to

plants

- Reduces excess nutrients in water sources

Fall or winter is the best time to soil test. It provides plenty of time for soil analysis and to follow fertility recommendations for the spring planting season. When you receive the soil test results, follow the recommendations and apply only the recommended amounts of fertilizer, says Dr. Njue.

A low soil pH decreases the uptake of essential nutrients and directly affects plant growth and yields. Adding the recommended amount of lime corrects the problem. Certain crops have specific nutrient needs; for example, tomatoes are sensitive to calcium deficiency which causes blossom-end rot.

A soil test is only as good as the sample which should represent the garden as a whole. Dr. Njue provides the following tips for insuring a good sample.

- Scrape plant debris from the soil surface before sampling.
- Sample gardens to a 6-inch depth.
- Use a clean bucket or other container and a soil probe or spade.
- Collect soil from at least 10 different areas scattered throughout the garden and thoroughly mix together in the container.
- Fill a sample bag or box (one can be obtained from your county Extension office) with one pint of the mixture.

To obtain a sample box, the address where to send your soil sample and more details on taking an accurate soil sample, contact your local county Extension office. Δ