

For Information call: 321-633-1702

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Soil Testing

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Now that the cold weather is over, everything is starting to grow again. It is typical, in the spring, to fertilize the lawn and landscape in time for the new spring-time flush of growth. What research has shown us though is that we don't always need to add all of the nutrients. And, the only way to know what you need to add is to have a soil test.

Most often, when people hear of a soil test, they think of soil pH which is a measure of the soil's acidity or alkalinity. In the truest sense of the word, a soil test actually refers to the measurement of nutrients available to the plant. The University of Florida has an Extension Soil Testing Laboratory that tests for P (Phosphorous), K (Potassium), Ca (Calcium) and Mg (Magnesium). They also test for soil pH and this test costs \$7 per sample. In comparison, our pH test, which can be done at either of our offices, only costs \$2 per sample. If you are ONLY interested in finding out if the pH is fine for the plants you are growing (or want to grow) in a certain location then, the pH test may be all you need. But, if you are interested in fertilizer recommendations then you should send a sample up to the Soils Lab for testing.

Recent research on established lawns has shown that after repeated use of a complete fertilizer (one that contains N-P-K) the P (Phosphorous) level is high or very high so that no additional Phosphorous is needed for a few years or so. Phosphorous is not mobile in the soil so, if the plant roots are not close enough to the molecule to absorb it, it will remain in the soil for a long time. Many soil tests are also showing K (Potassium) to be in high quantities in the soil so that additional fertilizer is not needed for this nutrient either. Nitrogen, on the other hand, is very mobile in the soil and if it is not absorbed by plant roots, it can leach out of the soil relatively quickly.

The Soils Lab does not test for Nitrogen because it is so mobile that it routinely needs to be added anyway. Phosphorous and Potassium, on the other hand, aren't as mobile and can get into high or very high amounts in the soil. Soils that consist of largely of quartz sand and soils which are primarily muck and peat are subject to leaching losses of added phosphate fertilizers. Another complication from an excess amount of Phosphorous can tie up some of the minor elements thereby causing deficiencies. The other issue is why pay money for nutrients that are in high supply if you don't need to. Save your money and just apply what is needed for the plants to grow well. Remember, the saying "if a little is good then more must be better" is not always true!

When fertilizing the landscape the most important nutrient to apply correctly so as not to harm the environment is Nitrogen. Research has shown that turf grass can only use one pound of Nitrogen per 1000 square feet IF 30-50% of the Nitrogen is from a water insoluble source OR it is manufactured in a slow-release formulation. Because of it's high solubility in water, Nitrogen can leach into the Indian River Lagoon, St. John's River or the aquifer. If the fertilizer is from a nitrogen source of Ammoniacal nitrogen, Urea nitrogen or other water soluble nitrogen then, it is typically a fertilizer made up of quick release nitrogen. The exception to this is if the bag specifically states that it is slow-release, timed-release or Poly Plus. Because high amounts of soluble nitrogen can burn plants or leach into the Indian River Lagoon, St. Johns River or the aquifer, it is very

important to apply smaller amounts (1/2 a pound per application) but more often if, the nitrogen source is Ammoniacal nitrogen, Urea nitrogen or other water soluble nitrogen with no mention of slow-release, timed-release or Poly Plus on the label. This is not only better for the plants but also the environment. High amounts of nitrogen in the foliage of plants (including turf) can result in insect infestations or outbreaks of disease.

For those of you who are interested in finding out what nutrients you need to add to the soil you can give us a call at 633-1702 and we will send you an Extension Soil Testing Laboratory form. The other option is to come by either of our offices and pick up a Soil Testing Kit which includes the form, sample bag(s) and a box. The form describes how to take a sample and where to send it. It is also very important to fill in the crop code on the form. On page 2 of the form there are seven crop codes for lawn grasses and five different crop codes for Landscape Plants and Vegetable Gardens. If you receive a form through the mail you can simply place your soil in brown lunch bags. Be sure to write your name, address and crop code on the outside of each sample bag in permanent ink. If you pick up the kit, the box will already have the Soil Testing Lab address on it, or you can simply mail it in your own box.