

Florida-Friendly Landscaping™

Florida-Friendly Roadmap



“pHeeding” Your Plants Isn’t So Simple

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The simple facts are sandy soils do not hold or capture soluble nutrients for later use by the plant. Fertilizers should be applied at the correct rates when plants are actively growing. Slow release fertilizers are recommended to reduce immediate nutrient transport to surface and ground water. Good job. You are applying slow release nutrients to your lawn and gardens. The right time of year? OK. You don’t apply nutrients prior to heavy rainfall common to our region. And yes, you carefully read the label and clean up spills when they occur. You seem to be doing things responsibly!

Mr. Green called me to inspect his ailing lawn. Lawns are the first cause of Florida homeowner distress and anxiety, also the biggest expense for water, fertilizer and responsible pest control. Everyone wants the perfect Florida lawn. Serenity now!

Mr. Green’s lawn is a typical St Augustine grass planted in full sun, supplemental water provided and cared for by common practices described above. Springtime temperatures are rising and the active growing season has begun. “Please look at my yard. Most of it looks good, similar to the neighbors, but this area seems to be struggling. Chlorotic and spongy. I am applying fertilizer correctly, appropriately watering, not scalping my lawn..... gasp”, Mr. Green grumbles.

I am sure Mr. Green is being truthful. He wants the Florida lawn he has always imagined. Less is better is my first response, but lawns do have a place and assist in preventing erosion and filter nutrients when fertilizer is applied correctly. OK. Your lawn is yellow in this area. The roots do not seem to be tacking down. This area is not actively growing. Why? Poor imported soils. Soil compaction. Soil chemistry?



“OK, Mr. Green I am recommending a soil test. No.... Nutrients move quickly through sandy soil. Nutrient testing is not imperative. Let’s do a soil pH test”,

Steven suggests. Chemistry happens in our soils. A soil pH test was performed and bingo; the test revealed a soil pH of 7.8.

Nutrients need to be in solution making them available to plant roots. All macro nutrients and micronutrients are soluble and available at pH ranges from 5.5 to 7.0. Strange things happen in soils.

(Continued on page 5)

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(continued from page 4) pH TESTING

A pH chart shows us that phosphorus is less soluble, less available at pH 7.8. Phosphorus is available in most Florida soils, although at 7.8 pH soluble P has bonded with other soils elements and is not available to the plant. You could apply phosphorus until the cows come home, but the nutrient is not soluble or available under existing pH conditions. Phosphorus is the powerhouse of the plant. Many chemical reactions happen within the plant and P being an important component. Photosynthesis, carbohydrate synthesisno plant energy.... no active growth.

The opposite may also be true. The soil pH can cause the nutrient to be so available creating a phytotoxic condition.

Therefore, a plant can show signs of nutrient deficiencies or toxicity even when the correct amount of fertilizer is applied to that plant based on the pH of the soil.

The chart above describes this interaction. The wider the bands above, the more available the element at the indicated pH ranges labeled on top of the chart. Thinner bands indicate less nutrient solubility or availability at the pH indicated. Macronutrients are most affected at acidic ranges, while micronutrients are more affected in alkaline soils. “Mr. Green we need to reduce the pH of your

soils so that the phosphorus, typically available in the soil is released and available to the plant”, Steven advises. Slow release sulfur coated fertilizers will slowly reduce the pH and even existing P in your soils will become available to landscape plants and turf. Changing soil pH is temporary so this practice must be accomplished at appropriate times of the year to maintain the pH level.

Iron is a micronutrient and an important component in chlorophyll, making the plant green. “Why do my azaleas have yellow leaves?” asks Mr. Green. “I applied fertilizer two weeks ago and nothing has changed.” Ok. Mr. Green let’s look at the chart again.

Make all fertilizer applications efficient, protecting the environment, while still feeding actively growing plants. Serenity now!

