

## Soil pH and Landscape Plants

By Chuck Lippi, Gerald Kidder, R.J. Black and K.C. Ruppert <sup>1</sup>

Soil pH is important to plants because it influences the chemical form of many elements which are plant nutrients in the soil and it influences soil microbes. Consequently, soil pH affects plant nutrition. While important, the impact of soil pH is often exaggerated. Here are some **common** questions and answers on soil pH:

### What is the “desirable pH range” for my plants?

There are plenty of charts and tables around that list the “desirable pH range” for just about any plant you might want to grow. Sometimes the term “optimum pH range” is used. First, in north Florida conditions, plants are often more tolerant of pH outside the ranges often given as “desirable”. Second, “desirable pH ranges” are often biased toward fine textured mineral soils such as silt loams and clays, which are not prevalent in Flagler County.

Consider correcting soil pH only when it is appreciably lower than the ideal for the kind of plants you are growing.

### How do I raise my soil pH?

Always test before liming. Don’t just assume that lime is needed. Many Florida soils already contain excess lime. Such soils will typically have pH’s between 7.0 and 8.2. Even slightly acidic soils with a pH around 6.0 generally do not require liming.

If addition of lime to your soil is recommended by the soil test, only apply the prescribed amount of agricultural limestone to your soil (refer to the recommendation section on page 2 of this document).

### How do I lower my soil pH if it’s too high for the plants I want to grow?

When soil pH is high because of naturally-occurring lime (such as limestone, marl, or sea shells), there is no practical way of lowering the soil pH. There is simply too much lime present to neutralize. The same is often true near new masonry buildings where excessive waste concrete and mortar fell on the soil during construction. Under those circumstances, select plants which are tolerant of high pH conditions to avoid continuing plant nutritional problems.

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#### Water Sample Electrical Conductivity:

<b>EL</b>	<b>6.27ms</b>
<b>WL</b>	<b>6.92ms</b>
<b>SCII</b>	<b>7.11ms</b>
<b>MSOA</b>	<b>6.83ms</b>

### Can’t I do anything to help my acid-loving plants grow in high-pH soil?

Sure, but be prepared for a never-ending, up-hill

battle. Elemental sulfur added to soil will result in a lower soil pH. That’s because soil bacteria transform elemental sulfur to sulfuric acid, which in turn neutralizes any alkalinity with which it comes in contact. However, as soon as the sulfur is used up, soil pH will return to its original level sometimes in as short a time as 2 weeks. Applying high rates of sulfur or making ap-

plications too frequently may damage your plants. Never apply more than 5 to 10 lbs. of sulfur per 1,000 square feet per application. And, don’t apply sulfur more frequently than once every three months.

### What effect does acid-forming fertilizer have on soil pH?

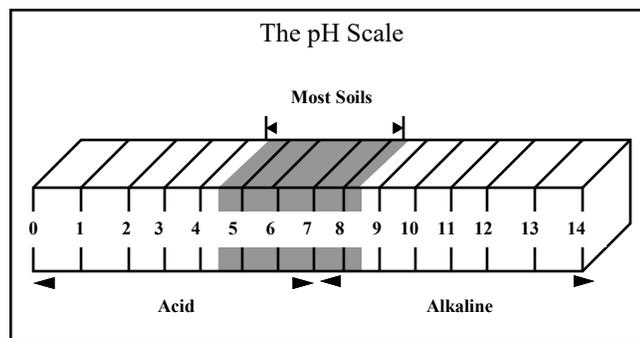
The so-called acid-forming fertilizers have relatively little effect on the soil pH at the rates normally used in the landscape. They do lower pH of already acidic soil, but are ineffective in lowering the pH of alkaline soil.

### So what pH should I try to have in my landscape?

The best advise is “don’t try too hard”. And, definitely, don’t apply lime or sulfur first, before testing your soil. Soil pH doesn’t need to be adjusted in the vast majority of Florida landscape situations, especially when pH is considered in selecting landscape plants. For example:

Popular lawn grasses such as St. Augustinegrass, bahiagrass, centipede and bermudagrass are quite tolerant of acidic soil.

Many popular woody plants such as pittosporum, ligustrum, hibiscus, oleander and pyracantha do as well at soil pH 5.0 as at 7.0. Others like azalea, holly, blueberry,



<sup>1</sup> Chuck Lippi is retired Director and Horticulture Agent, Flagler County Extension Service. Gerald Kidder is a Professor in the Soil and Water Science Dep’t., R.J. Black is an Emeritus Professor in the Environmental Horticulture Dep’t. and K.C. Ruppert is Assistant Extension Scientist Agricultural & Biological Engineering Dep’t., IFAS, University of Florida, Gainesville, FL 32611

