

# ACID-LOVING PLANTS IS AN ALKALINE WORLD

By Ralph E. Mitchell, Director/Horticulture Agent - UF/IFAS Extension Service, Charlotte County

Many of our most popular landscape plants are known as "acid-loving plants." Acid-loving plants prefer to grow in soils that have a lower pH. The problem is that many of our residential soils are alkaline in nature which makes it difficult for acid-loving plants to thrive. "Plan Before You Plant" is a good motto to follow when selecting plants that do best in your yard. Let's look at other considerations in dealing with our challenging soils.

Is your soil sweet or sour? Now, I don't mean that you have to go out and taste your soil! What I really mean to ask is - Is your soil acid or alkaline; in other words what is your soils' pH? Soil pH is an index that measures or indicates how acid or alkaline a soil is in comparison to neutral. For example, a pH of 4.5 on a scale of 0-14 is acid; a soil of 8.5 is alkaline. A pH of 7.0 is accordingly considered neutral. This may all sound picky, but pH is very important to the health of your plants.

When you select plants at garden centers or in catalogs, there may be information attached indicating the range of acceptable pH tolerance. For instance, the literature indicates that some plants such as Bahia grass prefer a pH below 5.5. Others like crotons are tolerant to a wide range of soil pH. Still others like Ixora prefer a truly acid soil of 5.0. Basically, if the pH is too extreme, certain nutrients will be bound up in the soil and not available to the plant. The plant will show this deficiency with poor growth, discoloration or decline.

But before you go out and try to adjust your soil,

you need to know what your pH is in the first place. A soil test will give you this information. You need that number before you can make an intelligent decision on what to plant or attempt a change. Typically, most of our residential soils will run between 7.0 and 8.2. You can pick-up soil test kits at our office. Reports come back in the mail generally within two weeks. If you need assistance in reading the soil test report, our office can help you interpret the results.

Say that you find that your lawn soil pH is very high. Looking closer at the soil we find that the soil is naturally very alkaline due to the presence of limestone, marl, or seashells. Sites that are near new concrete buildings or waste concrete may also be very alkaline. Generally, it is not feasible to try to lower the pH in these cases. The "parent" original material will always neutralize your efforts to adjust the pH. Instead, find plants that can adapt to these conditions. "Plan Before You Plant" is the best decision in most cases.

With our predominately alkaline soils, growing acid-loving plants like Ixora, for example, can be difficult. With proper care, Ixora should have dark green leaves and lots of flowers year round. It may take some extra effort in our area to get the best out of Ixora, but it can be done with some planning and maintenance.

As noted earlier, Ixora needs a soil pH of around 5.0 for best growth. A pH of 5.0 is a fairly acid soil that we need to reach as close as possible. In the



category of "Plan Before You Plant", keep Ixora away from concrete foundations or walkways which will make the surrounding soil more alkaline. Also, if possible, screen out any concrete bits and pieces that could change soil conditions to a higher pH. While we generally recommend that woody plants be planted into our native soils as is and without amendments, it may be helpful to improve the soil for Ixora before you plant to help lower the pH. A soil test will help you know the base pH from which you can make adjustments. Thoroughly mix in about 1/3 organic matter such as compost or peat moss. Pelleted elemental sulfur, when used according to label directions, can also help lower the pH. This attempt to lower the pH will be an ongoing challenge, however, as the native soils continue to neutralize the pH back to a more alkaline condition. Don't use rock as mulch as this can also raise the pH. Adapting the soil with acidic organic matter and/or pelleted elemental sulfur may help as a temporary

fix in smaller planting beds, but to do this over a large landscape is an impractical task with often disappointing results.

Keep in mind that acid-forming fertilizers do not have much effect on lowering soil pH, but are recommended as per label instructions for acid-loving plants. Acid-loving plant fertilizer has both macro and micro-nutrients essential for good growth. Symptoms of nutrient deficiencies such as yellowing leaves, smaller leaves, and the death of buds may be the result of a lack of iron and manganese uptake as can be found in alkaline soils. While granular fertilizers are commonly used, soils that have a high pH can "lock up" nutrients and make them biologically unavailable to the plant. One way to get around this is to use a foliar spray of liquid micronutrients available at garden centers. Use according to the label directions and be careful to avoid getting it on concrete which will stain it yellow.

*Resource:*

*Keeler, G. Gabel, K & Schoellhorn, R. (2003) Ixora for South Florida - UF/IFAS Extension Service.*

*Kidder, G., Black, R.J. & Ruppert, K.C. (1996), Soil pH and Landscape Plants - UF/IFAS Extension Service.*

For more information on all types of garden soil questions, please contact our Master Gardeners on the Plant Lifeline at 941.764.4340 from 1:00pm-4:00pm Mondays, Wednesdays, and Fridays. Our office is located at 25550 Harbor View Road, Suite 3, in Port Charlotte. Our Plant Clinics are available across the county:

- **Demonstration Garden** (6900 Florida Street, PG) Thursdays 9:00am-11:00am.
- **Englewood/Charlotte Public Library** Thursdays 10:00am-1:00pm.
- **Mid-County Regional Library** 1<sup>st</sup> and 3<sup>rd</sup> Thursday of month 1:00pm-3:00pm.
- **Edison College Learning Resources Library** 3<sup>rd</sup> Tuesday of month 1:00pm-4:00pm.

Ralph Mitchell ([Ralph.Mitchell@charlottefl.com](mailto:Ralph.Mitchell@charlottefl.com)) is the County Extension Director/Horticulture Agent for Charlotte County Extension Service. Contact a volunteer Master Gardener from 1:00pm-4:00pm Monday, Wednesday, and Friday at 941.764.4340 or by email ([Master.Gardener@charlottefl.com](mailto:Master.Gardener@charlottefl.com)).

For more information about our Florida Yards and Neighborhoods Program, please contact our FYN Horticulture Program Assistant, Allison Steele, at 941.764.4351. Allison can help educate you about the Florida Yards & Neighborhoods Program so that you can create a beautiful, Florida-Friendly landscape that saves you time and money while conserving precious water resources and reducing pollution.

Also, our next Best Management Practices Training concerning the new Fertilizer Ordinance for Commercial Fertilizer Applicators is scheduled for September 18<sup>th</sup> at our office from 8:00am-3:00pm. There is a \$25.00 fee and lunch is provided. For more information, please call 941.764.4340.