Ask a Master Gardener

Acid-loving Plants

By Trish Grenfell, Placer County Master Gardener

Q I know that azaleas, camellias, and hydrangeas prefer an acid soil, but what does that mean?

A While most of the plants that we grow in a garden prefer neutral to slightly acidic soil (pH range 6.0 -7.0), there are some plants that thrive well only in a more acidic soil pH and are referred to as acid loving plants.

The pH of a growing medium is important because it affects how plants take up dissolved nutrients through their roots. The uptake of phosphorus and most micronutrients, especially iron, manganese, copper, zinc, and boron are greatly impacted by an inappropriate pH. Deficiencies of iron induced by high pH tend to show chlorosis wherein the veins are green but the remaining leaf tissue is yellow. As the deficiency becomes more severe, the plant loses vigor and the foliage becomes almost completely white with dead areas forming at the growing points.

A pH test of your garden's soil is the best way to determine its acidity. However, if you already have a garden bed which includes both acid and more alkaline loving plants, the performance of these plants may have tipped you off to your garden's pH. Geraniums prefer a higher pH: 6.0-6.6. Petunias do best in 5.4-6.2. If you have a bed with both geraniums and petunias and the former are doing better, one cause may be the pH. These plants should not be growing together.

You can test your soil's pH yourself with an inexpensive kit—look for one at a good nursery or hardware store. If the pH is not appropriate for your acid-loving plants, lower the pH with some common amendments. Elemental sulfur can be used to lower soil pH. It reacts slowly, lowering the pH over 3 to 6 months. Another common recommendation, iron sulfate, works in about a month, but more of it is needed. The amount of either material depends on the soil type (sandy, clay or loam) and the number of points the pH must be lowered. Follow the directions that come with the amendment.

If your soil is deficient in nutrients, always choose a fertilizer specifically for acid-loving plants, but remember that a plant growing in its appropriate pH range, can much better access the soil's minerals. Plants such as bacopa, calibrachoa (million bells), diascia, nemesia, pansy, petunia, snapdragon, vinca are often misdiagnosed as a "high feed" or "high iron" group. Not so if the soil's pH range is 5.4-6.2.

Some examples of other popular acid loving shrubs commonly grown in landscapes are rhododendron, holly, blueberries, butterfly bush, heather, begonia, juniper, pin oak, magnolia, dogwood, and most conifers.

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