

## **Is Ph Important for Roses Going into Winter? If so, what can be done about it?**

The natural scheme of things for plants "growing" into October is for them to prepare to survive winter. Nature helps this process by having cooler nights, shorter days and usually the least amount of rain. This year I don't know how that can happen considering the extreme dry periods we have already experienced.

There are some ways to assist nature to prepare our rose plants for freezing temperatures that begin the winter season:

1. Do not fertilize or water deeply- on a weekly basis, "sprinkle" the ground only if you still have plants with buds showing color or blooms that you want to remain fresh.
2. For blooms left in the garden that lose their beauty, remove the aging petals but leave the seed pods.
3. If your rose garden has a lot of color (blooms) and the forecast is for frost, you can protect them by covering with remay or other lightweight cloth materials. If plastic is used, avoid contact with the plants or damage will occur.
4. If you incorporate organic matter, manure, compost, or mulch into the rose bed and/or use a dry fertilizer regularly (monthly) during the season, you should compensate for these acidic materials by adding lime unless you know your soil is alkaline. Dolomitic lime, a finely ground alkaline material that yields both Calcium and Magnesium when it breaks down is best. It can be obtained at almost any garden center. A 50-lb. bag is only a few dollars.
5. After a couple of large hands full of lime has been applied evenly around each rose bush, it's time to mix into the soil together with the mulch. Do this with a small tiller, a Mantis or similar one. Disturbing the roots or cutting them off does no harm. A spade or fork can be used to turn over the soil and although this is hard work, the results next spring will make it well worth the effort. This process can be done anytime from mid October until next March, as long as the ground is not frozen or too wet.

A note about lime and how it works:

1. It is a compound Calcium Carbonate; Dolomitic lime also includes a compound Magnesium Carbonate.
2. Lime does not break down or dissolve in water. As a result, it does not go through the soil but perhaps  $\frac{1}{2}$  inch per year.
3. To be effective lime must be incorporated (mixed) in the soil. When it comes in contact with acid soil particles, (those with a Ph below 6.5) it neutralizes these while making Calcium and Magnesium available.
4. It takes 6 to 9 months for this to happen. This is the reason to mix lime in the bed in the fall. By next spring it has done its job.
5. Unless salts are present in the soil (from some manures or inexpensive dry fertilizers) and an optimum Ph for roses is reached (6.5), any excess lime which has not broken down will remain as a compound. In most Kentucky soils, this residual or excess lime will remain in the soil until it is needed to neutralize future acidic particles. The soil Ph will stay in the optimum range below 7.0.

The Ph is important because there is an optimum range of values for plants to fully utilize all of the nutrients that are present in the soil. For roses it is 6.0 to 7.0. Very simply, when the Ph is outside the desired limits, nutrients needed for plant health, growth and bloom or fruit production are not available to the plant even though they are present. Desired results cannot be obtained unless the Ph is in the "good" range.

Signs of an out of balance Ph for roses may appear as any or all of the following, assuming a balanced fertilizer has been used:

1. The growth is thin and the leaves are pale green.
2. None of the stems of the current season's growth are larger than ¼ inch.
3. The new growth in spring comes up green, not purplish-red.
4. Even though plants were mulched for winter and crowns or bud-unions were below ground level, no new growth emerged in the spring after ground temperatures warmed. Dead roses over winter often indicates that needed nutrients were not available because of an out of range Ph.

If you are in doubt about the Ph of your rose bed after reviewing the foregoing "symptoms", a soil sample taken to your State Agricultural Department Extension should get you back on track or at least eliminate the Ph factor as being a problem.