

Fertilizing the Rose Gardens at FSC

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This is a modification of an article in the April, 1993 *Cherokee Rose*, updated to our current methods. First, it should be pointed out that **there is no single "right" way to fertilize roses**. There are probably as many different recipes and procedures as there are rose growers, any of which may be "right," assuming that the roses thrive and are productive under the program. But here is a summary of the methods we have used for numerous years at FSC, with pleasing results.

Soil Testing and pH Control

Roses grow best when the soil is slightly acidic, in a pH range of about 6.5 to 7.0 (7.0 is neutral; lower pH values are acidic or "sour," and higher values are said to be alkaline, basic, or "sweet"). Most fertilizers have a tendency to acidify the soil, reducing the pH. So, Central Florida rosarians generally work at raising their soil pH and seldom have to worry about reducing it. Of course, in parts of south Florida, where much of the soil is limestone-based, growers may need to reduce the pH. The most commonly used material for raising the soil pH is dolomite (= dolomitic lime), which is very slow-acting, lasts a long time in the soil, and provides a long-term source of calcium and magnesium to the plants. Another material sometime used is calcic lime (also known as agricultural lime, hi-cal, or aglime), which is faster-acting than dolomite, but still slow. It provides calcium but no magnesium. Quick lime and slaked lime are also sometimes used; they are very fast-acting and provide calcium to the soil. If you use a quick-acting material, it's important not to use too much, since you can easily overdo the dose. Also, quick and slaked lime are highly caustic and can cause nasty burns on your skin, so we don't use them. We nearly always use dolomite. Immediately after pruning our roses (late February or early March), we test the soil pH under each rose in our gardens. This is an all-day job for at least 2 people, but there has been enough variation from plant to plant that we consider it worthwhile to test each plant. First, the mulch, dead leaves, old fertilizer, etc., are raked away from the plant, so the sample can be taken without contamination by those materials. We then punch a hole 6-12 inches deep, collecting perhaps a quarter cup of soil from the hole. We collect another sample from the other side of the bush and then mix the 2 samples in a styrofoam cup, which has been labeled with the bush identification number. The pH is measured in the lab with a pH meter. After testing each sample, an appropriate amount of dolomite is added to the soil under the bushes. We punch holes in the soil, about a foot deep, and fill them with the dolomite. This places the material near the roots rather than on top of the soil, an important consideration since dolomite is not very soluble and so tends to stay wherever you put it.

Here are the amounts of dolomite we use, based on the pH measurement, assuming that the soil is more than 50% organic matter and that we are treating a 6-8 square-foot area:

<u>Soil pH</u>	<u>Dolomite (cups)</u>
over 7.5	0
7.0-7.4	1 (to prevent pH from falling too low in the next year)
6.5-6.9	1.5
6.0-6.4	2
5.5-5.9	3
5.0-5.4	4 - 5
4.5-4.9	6 - 7
4.0-4.4	8 - 10



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Cont'd.



We put the dolomite in several holes, distributed around the bush (at least one hole per cup of dolomite used). If you fertilize your roses less heavily than we, you could probably lessen the amount of dolomite used as well, since it is counteracting the acidifying effect of the fertilizer.

Fertilizers

We apply the following fertilizer materials in a ring around the bush, about 1- to 1-1/2 feet from the trunk:

Harrell's Polyon 15-6-12 9-month formula	3 cups
Milorganite	3 cups
Alfalfa pellets	2 cups
Gypsum (CaSO ₄)	1/2 cup
Epsom Salts (MgSO ₄)	1/4 cup
Micromax or similar	1/8 cup (not every year; maybe once in 3 years)
Kmag (sulpomag)	1/8 cup

Notes:

- Polyon comes in many formulations both for ratio and time to release. We have no mystical-magical reason for using this one -- it's available and we like it.
- We don't use trace elements (Micromax) every year, since they tend to stay in the soil for long periods of time.
- We use gypsum not to alter the soil structure, as is done out West; rather, as a quickly available source of calcium and sulfur.

These materials are put on the soil surface, then covered with mulch. We use the same fertilizers, in the same amounts, again in early July (no Polyon or Micromax). At that time, we don't test the soil or add any dolomite. In early November, we sometimes use a couple cups of Milorganite and another 1/8 cup of Kmag. The only other fertilizer material we use is chelated iron, on an as-needed basis, usually in late March or early April. We mulch with pine straw, several inches deep.



Don't forget to turn your clocks forward March 14th!

