

Fertilizers: When and How

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Roses are heavy feeders, but supplied with a varied nutritional diet, they will provide an abundance of large, beautiful blooms. After the first spring bloom, you will be reminded that the reward is well worth the effort you expend.

NEW ROSES VS. ESTABLISHED BUSHES For newly planted bare root plants, care must be taken not to burn the tiny new roots. Apply organic amendments to the soil at planting time, then wait until after the plant has produced its first blooms to apply chemical fertilizers. By this time you can be sure the roots are large enough to withstand chemical additions without burning. Water well first, apply the fertilizer and water well again. You may now begin a regular feeding program, but take a little extra caution - use weaker strength fertilizers on a more frequent basis for a safe, adequate food supply.

WHEN TO START FERTILIZING ESTABLISHED BUSHES Immediately after pruning, incorporate organic amendments into the soil. As the soil warms with the weather, the organics will start to break down and supply a slow release nutritional diet to your roses, as well as feeding the soil micro-organisms. A basic recipe would include, per bush:

- 1 cup bone meal or superphosphate (0-20-0)
- 1 cup cottonseed meal
- 1/2 cup blood meal
- 1/2 cup fish meal
- 1/2 cup epsom salts (magnesium sulphate)

Water thoroughly first, then spread the ingredients evenly around the bush, under the drip-line (outer perimeter) of the bush. Scratch lightly into the top 1-2" of soil and water well again. In warm climates with long growing seasons (January-February pruning and blooms through November-December), a second application is beneficial in early September for fall bloom cycles.

About two to three weeks after spring pruning and adding organic amendments, new growth will appear. Chemical fertilizers, whether liquid or dry, can be applied at this time, and will provide an instant food source for this neavy feeding period. How often to apply is a subjective decision, based on the amount of time and devotion you have, but once a month should be the minimum. First, lets determine your style:

CASUAL ROSE GROWER You like to look at roses from your window, but don't know the varietal names and only cut a few for the house. Your best bet would be a granular food with an N-P-K of about 10-10-10, applied every four weeks according to directions. Fish emulsion applied as a liquid fertilizer when buds are about pea-size (about three weeks before each bloom cycle) will enhance bloom color. Add chelated iron for rich green foliage. In hot climates, reduce the amount of fertilizer applied by half during June, July and August, but stay on the same 4-week frequency. Don't overlook the semi-annual dose of amendments!

DEDICATED GARDENER Realizing roses require a steady source of food, and having the time to supply it, you are willing to adopt a bi-weekly fertilizer program for the big blooms. Start with an application of granular food as first growth appears in Spring. Then begin a program of liquid fertilizers, alternating the following on a two-week basis:

- Peters, Grow More or Verdi-sol: (all 20-20-20)
- Fish Emulsion (5-1-1)
- Green-Up, Deep Feed or Pentrex: (soil penetrant, fertilizers and iron, 16-4-2)
- Epsom Salts (magnesium sulfate)

Apply according to package directions, usually 1 Tbsp per gallon, 2 gallons per bush. Add Epsom Salts at 1/4 C per bush, either dissolved in the liquid feeding or sprinkled straight from the package onto the soil. A periodic dose of iron chelate added to the fertilizer may be required for deep green foliage.

MAIN LINE ROSE JUNKIE (OR EXHIBITOR) Your "main line" is your hose, and you have had it surgically attached to your hand, since you fertilize weekly. Your main goal is a trophy in a local, district or national rose show. Use the above rotation of fertilizers on a weekly basis, but reduce the concentration to about half of that called for on the label. Iron chelate added to a solution monthly, and zinc chelate three weeks before a show will ensure rich foliage and bloom color.

HOW TO APPLY This again depends upon the number of rose plants you have and the method and type of fertilizer you choose. Granular fertilizers need only to be evenly scattered on the damp soil, 8" away from the bud union, scratched lightly into the soil, and watered in well (one-two gallons per bush). For liquid or water soluble fertilizers, two devices can play time-saving roles. Hose-end sprayers that will hold enough liquid or soluble fertilizer to feed your number of bushes with one or two fillings are great. The sprayer should have an adjustable dial that indicates how many ounces, teaspoons or tablespoons per gallon of water you are delivering. Fertilizers used must be water soluble, meaning they dissolve thoroughly and quickly in water. Miracle-Gro is a good example.

If you have succumbed to greed and compulsion, and your rose garden has grown beyond 50-60 plants, I recommend a syphon device. At about \$10, this is a garden miracle-worker, available at most nurseries. A brass connector is placed between your water spigot and hose, to which a black tube is attached. You mix any water-soluble fertilizer with water in a 5-gallon bucket, at 16 times the concentration prescribed on the package, and leave the bucket at the water spigot. The tube placed in the bucket draws out one part concentrate and mixes it with 16 parts water, delivers it from the hose end, and fertilizes 30-35 bushes at the recommended dilution. And you never lift the bucket! Again, water soluble fertilizers must be used. Start with 4-5 inches of HOT water in a 5-gallon bucket, add the fertilizers and stir until dissolved. Then fill the bucket to the desired concentration.

HOW LONG TO CONTINUE Roses need a constant food source throughout their growing season. In areas of high heat, June, July and August are very stressful times for all plants. The recommended approach during those months is to reduce the quantity of applied fertilizer by half, but on the same frequency. Also during those months, when you water every day and flood once a week, it makes little sense to use liquid fertilizers, as they are flushed out of the soil as quickly as they are applied. A granular rose food of about a 6-12-6, used half strength, will supply a steady release of nutrients without high nitrogen concentration, to allow a semi-dormancy of the bushes during this period. Exhibitors withhold nitrogen and increase phosphorus about three weeks prior to shows, to focus growth away from leaves and stems, and into bloom quality. The same theory should be applied in fall. Apply your last nitrogen-based fertilizer about 30-45 days before the first frost date. You don't want to encourage lush new cane growth that will not have time to harden off prior to frost or cold.

CLIMBERS Being two to three times the size of bushes, climbers need 2 to 3 times the fertilizer. If using granular food, apply double strength and a little more often, spreading around the plant out to the drip line. If using liquid, saturate the same ground area well.

MINIATURES Minis are hardier to heat and cold than their big sisters, but are very sensitive to fertilizers. Always feed half strength, whatever you use. They love fish emulsion and other natural products. Minis in containers must be watered well before application of any fertilizer, but allowed to drain well too. Remove the tray from beneath the container, to allow them to drain completely and not be left standing in water.