

Feeding, Watering & Mulching

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There are few topics about roses on which there are more differing points of view than feeding and watering. While growing roses in our low desert climate narrows the field of controversy some, still many a lively conversation will follow the reading of this article.

Feeding: Roses are relatively “heavy feeders” and need a regular diet of fertilizer balanced for rose horticulture. The primary nutrients, or NPK, are nitrogen, phosphorous, and potassium. Most formulas also contain secondary nutrients (calcium, magnesium, sulfur) and micronutrients (iron, zinc, manganese, copper, boron, and molybdenum). By law, every fertilizer must have its numerical N-P-K ratio listed on its packaging. This ratio will tell you what you can expect from its formula. You will usually see this expressed as 12-12-12 or 6-12-6 or 16-4-2. These numbers represent what percentage of the total content of the package is of each nutrient. A 12-12-12 fertilizer is twice as strong as a 6-6-6 fertilizer. These percentages can be important when figuring how much fertilizer you are getting for your dollar. It will take two pounds of 6-6-6 to do the job of one pound of 12-12-12.

N-Nitrogen promotes leaf growth and green foliage. **P-Phosphorous** encourages root growth and flowering. **K-Potassium** fosters overall plant health and hardiness to heat, drought, and cold. In addition, it acts as a catalyst for nitrogen and phosphorus. In complete fertilizers, you will also find secondary nutrients and micronutrients.

These nutrients are available in both organic (from plant and animal sources) and inorganic (synthetic or chemical) forms. Inorganic fertilizers work quickly. Organic fertilizers work more slowly but benefit the soil as well as the plant. In addition, organic nutrients will continue to benefit the plant and soil long after the inorganic nutrients are exhausted. The choice is yours; however, the current thinking is that both can work together, giving you rapid results while building for the future.

Basic Feeding Schedule: Apply commercial fertilizers as directed on the package. The frequency of feeding can vary from brand to brand depending on the concentration of the nutrients. Established roses are usually fed every four weeks with granular fertilizers. If you choose to use a liquid fertilizer, you will need to feed about every two weeks. A water soluble fertilizer will wash down past the root zone faster than a granular because the granular has to dissolve first. A couple of things to always remember: when the granular fertilizer manufacturer says to water before and after fertilizing to prevent fertilizer burn, they mean it. When they tell you to work your fertilizer into the top inch or so of soil, they mean it, because the potassium portion of the fertilizer has to be in, not on, the soil to be available to the rose.

Traditionally, start feeding after the winter pruning when the plants have one inch of new growth. Continue until the weather gets hot, usually in mid-May. Then resume feeding in

September after the fall pruning and continue until about mid-November. However, a number of rose growers have adopted the practice of continuing to feed at half the normal concentration, or even less, during the hot summer months.

Apply fertilizers around the drip-line (outer perimeter) of the plant. The same general timing for when to feed applies to organic fertilizers but check the individual product package for the frequency of feeding. Thoroughly water your plants before and after applying fertilizer to avoid burning the roots.

No discussion of feeding roses would be complete without considering the organic content of your soil and its effect on plant nourishment. Our desert soil is virtually devoid of organic matter and the best way to get it into the soil is to add it when you plant.

Organic mulches and compost when applied to the soil surface gradually decompose and add their organic content to your soil. Composted yard waste, forest humus, peat moss, leaf mold, and manures will all become part of the organic makeup of your soil. Soils high in organic matter convert nutrients more easily, making them readily available to the plant. It's a good idea to perform a soil test before amending your soil at the time of planting and periodically thereafter to determine what is needed in terms of soil amendments. Simple soil testing kits may be purchased at local garden centers or more sophisticated tests may be found via the internet and require soil samples to be sent out for laboratory testing.

Watering: Water is the ultimate fertilizer. It moves nutrients from the soil into the plant. To determine how much water your roses need, consider the density of organic matter in your soil and your garden's microclimate. The more organic matter in your soil, the more moisture it retains and the less time it takes water to reach the plant roots. Mulch on the surface also helps retain moisture.

The amount of water to use will also vary with the season and temperatures. You may need to use trial and error to determine the correct amount of water to use on your roses and make adjustments as the seasons change. You do not want to allow your soil to become dry further down than one to two inches, yet you do not want to overwater, either. Roses do not like wet feet.

Irrigation choices include drip systems, underground sprinklers, and hand watering. Drip, or low-volume, irrigation is an efficient method that delivers water where intended with little runoff or evaporation. Underground watering systems with conventional above ground spray heads direct water up onto the foliage, which is effective in removing spider mites that live on the underside of the leaves as well as creating some welcome humidity and cooling in our hot, dry climate. The downside of top watering is that the minerals in our water leave mineral deposit on the foliage. A midway solution is top watering with a sprinkler that sprays out rather than up so only the lower portion of the plant receives water and not on the flowers and foliage.

Hand watering, while often enjoyable, is simply unrealistic in our climate. Even roses grown

in containers are best watered with an automatically timed drip system connected to your overall yard and garden irrigation system.

Mulching: Mulch is organic matter that promotes moisture retention by slowing evaporation, suppresses weed growth, and cools the soil.

Mulches can be anything from a natural source that does not contain weed seeds and is not too fresh. Common types of mulches include shredded bark, wood chips, sawdust, straw, alfalfa hay, cocoa bean hulls, pine needles, composted leaves, peat moss, and leaf mold.

Apply the mulch to the surface of the entire rose planting bed to a depth of between two and four inches. Then replace it regularly when it falls below these depths.