Paul Zimmerman – Fertilizing Roses

<https://www.youtube.com/watch?v=u-hSUrlvz6Q&feature=emb_logo>

THE FULL SCOOP ABOUT FERTILIZERS - Taken from: http://www.marinrose.org/scoop-need.html

**WHAT YOUR ROSES REALLY NEED**

by Nanette Londeree, Master Rosarian

Giving your roses a high quality environment and balanced nutrition can result in robust plants that produce lots of healthy foliage, an abundance of blooms, and an enhanced ability to resist attack from pests and disease. It doesn’t have to be a lot of hard work, complicated or involve a truckload of chemicals. Consider those old roses flourishing in cemeteries or abandoned gardens that continue to grow and bloom with no human intervention – they almost seem to thrive on neglect! Compared to those survivors, our modern roses are really pampered; in return, they provide us with gorgeous flowers for much of the year. So, what are the absolute minimum things roses need?

They’re actually pretty simple – begin with a healthy specimen of a well-chosen rose variety, and plant it in a sunny location that gets at least 6 hours of sun a day. Locate the rose where it doesn’t have to compete with other plants’ roots and has reasonable protection from wind and surfaces that radiate a lot of heat. Plant it in soil that has good drainage. Keep the rose watered, appropriate for weather conditions and type of soil. Deadhead spent blooms to stimulate flower production, and prune to encourage new growth and blooming. That’s all you really NEED to do. To promote more vigorous growth and abundant bloom you can feed them, mulch to keep weeds down and conserve water, and protect them from pests and disease.

Fertilizing plants is desirable to provide nutrients essential for optimum growth at the time they are needed. Even if you’re lucky enough to start with great garden soil, as your plants grow, they absorb nutrients and leave the soil less fertile. By fertilizing, you replenish lost nutrients and ensure that plants have what they need to flourish. If and how you fertilize your roses depends on what you want from them. If you’re an active exhibitor, you’re likely to have a more intensive fertilization program to pump out that Queen of Show bloom than if you’re simply looking for lovely flowers to grace your garden. No matter what you’re after, providing your plants with their nutritional needs starts with the soil. What you see going on with your roses above the ground is largely determined by what goes on below your feet (the top 4 – 8 inches of soil is where plants mostly get their nutrients). No matter how much you baby your plants, if the soil isn’t functional and healthy, it won’t matter much. A golden rule of gardening says, "If you treat your soil well, it will treat your plants well."

*How About Alfalfa?*

*Alfalfa is not just for rabbits! In addition to the organics and minerals in alfalfa that are great for feeding the soil (NPK ratio 3-1-2), the tonic that roses really go for is triacontanol, a naturally occurring fatty alcohol produced as the alfalfa breaks down. It’s a growth stimulant, so when it reaches the roses roots, it can trigger new growth at the bud union or base of the plant, in addition to increasing overall plant vigor and flower production. You can use meal or pellets. Before you purchase, confirm that the product doesn’t contain any molasses, sugar or other additives. You don’t need these other ingredients, and they’ll cost you more.*

Alfalfa Tea By: Howard Walters

Alfalfa tea is a great spring or fall potion that doesn't interfere with normal seasonal processes. Alfalfa tea releases a growth hormone that makes everything work better. Just add 10 to 12 cups of alfalfa meal or pellets to a 32-gallon plastic garbage can (with a lid), add water, stir and steep for four or five days, stirring occasionally. You may also "fortify" with 2 cups of Epsom salts, 1/2 cup of Sequestrene® (chelated iron, now called Sprint 330) or your favorite trace element elixir. The tea will start to smell in about three days. Keep the lid ON. Use about a gallon of mix on large rose bushes, 1/3 that much on mini's. And keep the water going. When you get to the bottom of the barrel, add water to fill it up again! One load of meal or pellets will brew up two barrels full, but add more fortifiers for the second barrel. You'll see greener growth and stronger stems within a week.

Have you ever seen fluffy, chocolate brown dirt that’s so light and workable, you can sink your hand into it up to your elbow? It’s the stuff that gardening dreams are made of. Most likely, the native soil didn’t look like that and the owner of the enviable stuff has been working at creating it for a long time. That ideal soil would be made up of 45% minerals (sand, clay, silt), 5 % organic (plant and animal) material, 25% air and 25% water. The mineral portion would be loam (20 – 30% clay, 30 – 50% silt and 30 – 50% sand). It would be crumbly, relatively dark in color, smell earthy and rich, team with microorganisms and earthworms, have plenty of nutrients and a pH between 6.5 and 7.5. How does your soil compare to this ideal? If it doesn’t quite measure up, you may want to add materials to improve it. That’s where amendments, conditioners, enrichments and mulches can play a role – all of them can be considered, depending on the materials used, a fertilizer.

*What is your soil texture?*

*Soil Diagram*

*Fill a glass container about two-thirds full of water, and add enough dry, crumbled soil to almost fill the container. Add a lid and shake vigorously for a few minutes, then set it aside for a day or two until the solids have settled out. Sand will settle to the bottom, then silt, and clay will be the top layer. Determine the approximate percentage of each major layer; find your approximate percentage on each side of the triangle to the right, then move towards the center of the triangle and find where the three percentages meet. That will identify your type of soil.*

Before you start piling on soil conditioner, Epsom salts, fish emulsion or other fertilizers, it’s important to understand your current soil and conditions – otherwise you may just be wasting your time and money. The main things you want to know about your soil are the texture, structure, pH and drainage. Texture is the proportion of sand, silt and clay particles that make it up. The structure relates to how the particles are held together, or clump together into crumbs or clods. The pH is how acidic or basic the soil is, and drainage – whether water drains freely from the soil, sits stubbornly in place or somewhere in between. Each of these can play a key role in the health of the soil and its effective delivery of needed nutrients to your roses.

A simple physical test can help you figure out your soil texture, you can purchase an inexpensive pH test kit to confirm the soil’s pH, and drainage is easy to evaluate – just dig a hole, fill it with water and time how long it take drain completely. Once you’re equipped with this information, you’ll be able to determine what you may want to change or improve in your soil, what, when and how much you’ll need of the desired material to do so, and how to do it. We’ll be covering those subjects and more in coming issues.

Soil diagram courtesy of http://wakefieldsoil.blogspot.com

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**WHAT ARE THEY AND WHAT DO THEY DO?**

by Nanette Londeree, Master Rosarian

Diagram

Description automatically generated

There’s a lot of confusion about terms when it comes to fertilizers. Just stop and peruse the shelves at your local nursery or home improvement store. You’ll find a mind-boggling array of things to sprinkle, spread, spray on, pour on, mix in, pound in; there’s food, meal, pellets, encapsulated nutrients, and don’t forget the conditioner, compost, mulches and more. Are they all fertilizers? Is a fertilizer the same thing as a nutrient? An amendment? A mulch? If not, what’s the difference? And what do they do? Are there legal requirements for something to be labeled as a fertilizer? Let’s find out.

Plant nutrients are the chemical elements taken in by plants that are essential for their growth and development. A fertilizer is a material added to the environment around the plant that directly impacts the plant, providing it with specific nutrients. Amendments are any materials mixed into the soil that indirectly aid plant growth by improving the condition of the soil like its structure or texture, water retention or microbial activity. Mulches are organic or inorganic materials placed on the soil surface to help prevent weed growth, conserve moisture and add organic matter to the soil as they break down.

Grow-Max Chart Fertilizers are NOT plant food! Plants make their own food (sugars and carbohydrates) using water, carbon dioxide and sunlight and combine them with plant nutrients to produce the proteins, enzymes and vitamins essential to plant growth. When we fertilize, we are applying plant nutrients to supplement nutrients naturally occurring in the soil.

The law requires that manufacturers guarantee the accuracy of what is claimed on a product label - if it’s on the tag, it’s got to be in the bag. The term fertilizer refers to a material that guarantees the minimum percentages of primary nutrients - nitrogen, phosphate and potash, found on the container label. The product label may also identify other nutrients, like sulfur, iron and zinc if the manufacturer wants to guarantee the amount contained in the product. In some cases, a fertilizer will contain secondary nutrients or micronutrients not listed on the label because the manufacturer does not want to guarantee their exact amounts. Soil amendments make no legal claims about nutrient content or other helpful (or harmful) effects they may have on the soil and plant growth.

Plants require seventeen different chemical elements for healthy growth though most of these elements are already in the soil or the air and don’t need to be added regularly. These seventeen elements are broken down into four general groups - the essential elements, the primary or macronutrients, the secondary nutrients and the micronutrients or trace elements. The elements essential to all forms of life, carbon, hydrogen and oxygen, are derived primarily from air and water. The three primary nutrients are nitrogen, phosphorus and potassium; they

*How About Banana Peels?*

*If you like slow release, natural fertilizer for your roses, don’t toss those banana peels away. They’re rich in potassium that can be a boost to overall plant vigor and disease resistance. Chop them up and throw them in the compost bin, or bury them around the base of your plants.*

*are the most common fertilizer ingredients. Next are the three secondary nutrients - calcium, magnesium and sulfur. The remaining eight are micronutrients - boron, chlorine, copper, iron, manganese, molybdenum, nickel and zinc. While the three essential elements are vital for life itself (no plant will grow without all of these), the remaining fourteen play varying roles in plant growth and health. The following table provides some of the key functions of each element as well as the soil pH range in which they are most readily available. Next time we’ll explore the many types, forms and formulations of fertilizers that are available, including organic vs inorganic materials.*

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**WHEN AND HOW TO DO IT**

by Nanette Londeree, Master Rosarian

Are you a casual rose grower or a passionate exhibitor? The answer to that question can be a help as you develop your fertilizing routine. You may want to do a simple once or twice a year addition of granular fertilizer to keep things looking good, or weekly applications of a secret tonic that consistently wins you Queen of the Show. Whatever you choose to do to provide nutrients to your roses, when and how you do can have an impact on the results.

When to fertilize

Timing is everything! If you feed too early in the year, the seasonal rains may wash all your valuable nutrients away; too late in the season, the plants are starting to shut down and don’t need the extras. For established plants, time your application to maximize the benefit of your fertilizer so that nutrients are available to the plant when it needs it most – during the active growing and blooming stage. It generally starts around April when the weather has warmed the soil and slows down as the soil temperature drops – late September. The frequency of application will depend on what you’re after – bountiful blooms or that Queen of the Show, the quality of your soil, and the weather. If your roses are planted in healthy soil that is rich in organic materials, you generally don’t need to add any fertilizers until after the first big bloom.

Bone Meal When planting young roses without well-developed roots, a handful of bone meal (~2.0 - 28.0 - 0.2) can aid in development of roots, while organic materials like compost that break down slowly, provide a source of nutrition that won’t damage fragile root hairs. The addition of a time-released fertilizer at planting can also provide that steady stream of nutrients throughout the growing season, for 4, 6, or 8 months depending on the formulation. For these types of fertilizer, nutrient release is dependent on the soil moisture and temperature. Wait until the plant has gone through its first bloom cycle before applying chemical fertilizers.

To protect your plants from damage, make sure to water the plants thoroughly the day before and after fertilizing. Adding fertilizers, especially inorganic ones, to a dry plant can result in leaf burn or worse. Similarly, don’t fertilize on a scorchingly hot day; the plants are working hard just to stay hydrated, and the additional materials may not be of much benefit. Watering after fertilizing helps move nutrients into the root zone. When doing a foliar application of fertilizer, do it early in the morning when the liquids will be absorbed most quickly, won’t burn foliage and the leaves have time to dry completely.

*How About Seaweed?*

*Harvested from the ocean, the marine kelp ‘Ascophyllus nodosum’ (not the kelp that washes up onto the beach) is the most common form of seaweed available as fertilizer – it comes in liquid, powder, meal or pellet form. In addition to a little nitrogen and potassium (1.5-0.5-2.5), it adds valuable trace elements, growth hormones, and vitamins that can help improve overall plant growth and reduce plant stress from drought.*

How to apply fertilizer

Watering with hose How you apply fertilizer depends on what you are adding and when. For granular, powder or pelleted-type fertilizers, scatter them around the base of the plants and scratch lightly into the soil. Water-soluble products can be simply mixed in a watering can and applied directly to the plant, or if you’re fertilizing a larger number of plants, you may want to try a delivery device – ones that add concentrated liquid fertilizer to water at a specific rate.  Siphoning fertilizer Called proportioners, they can be a hose-end sprayer with an adjustable dial that indicates the concentration of fertilizer you’re adding per gallon of water, a siphon device or an automated metering device. The siphon is a simple device with a connector that attaches to your water faucet and hose. It has a plastic or rubber tube connected to it; the unattached end is immersed in a container with a concentrated solution of water-soluble fertilizer. When you turn the hose on, the water pressuare draws up the concentrated solution and mixes it with water to dilute the fertilizer as you apply it to your plants. The metering device functions in a similar way and can be added to your automated irrigation system to deliver a desired concentration of fertilizer every time you water.

Foliar feeding

The fastest route for providing nutrients is through the leaves - spraying a dilute solution of fertilizer directly on the foliage. Plants can absorb nutrients 8 - 20 times more efficiently through their leaf surfaces than through their roots. When using the foliar feeding approach, use a surfactant such as a mild soap (1/4 teaspoon/gallon of spray) to ensure coverage of the leaves, otherwise the spray may bead up on the foliage. Any application system that can provide a dilute liquid to the leaves will work (watering can, hose-end or backpack sprayer, etc.). Use a fine spray and spray until the liquid drips off the leaves. Also spray on the underside of the leaves where pores are more likely to be open.

If you’re growing roses in pots, use your solid or liquid fertilizer at one-half strength twice as often as roses in the ground, as watering flushes the fertilizer from the potted soil more quickly. Remember to water the rose well the day before fertilizing so there is less chance of burning the tender roots.

Finally, be gentle with your miniature roses, they can be sensitive to chemical fertilizers, so it’s wise to fertilize them at half-strength.