## The Rose

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## Our national flower and its care

A symbol of love and beauty as well as war and politics, the rose was designated our national flower in 1986. It won by popular vote over the American marigold. It is also the state flower in five states: Georgia, Iowa, New York, North Dakota and Oklahoma.

In addition to its beauty, its form, fragrance, hardiness and ability to crawl, sprawl and climb make it a winner in our gardens. The many varieties of roses and their descriptions are included at the end of the article.

Roses require a minimum of six hours of sun. More is better! Give them good air circulation, so they do not have to compete for nutrients. Roses prefer a pH of 6.5 (slightly acidic). They do not like to have wet feet; elevate them in a raised bed if you have heavy, clay soil. (For raised beds use compost, or a mix of five parts loamy soil, four parts organic matter and one part builders' sand.)

A soil test is a "must." It will tell you the nutrients available in your garden as well as the pH level. Primary nutrients are nitrogen (N), phosphorus (P) and potassium (K).

Nitrogen promotes good stem, cane and leaf growth by regulating the plant's ability to make proteins. Too much can produce over-vegetation at the expense of flowers. This over-stimulation is a main attraction for aphids. Too much nitrogen can also result in weak, spindly growth that lacks disease resistance and is easily damaged by cold. It can burn the roots and kill the plant.

Plants need phosphorus for the production of sugars, or energy. Too much acidity in the soil may hamper the plant's ability to pick up the phosphorus. Raising the pH to an adequate level should release this important nutrient.

Linda Chalker-Scott, PhD, extension urban horticulturist at WSU's Puyallup Research and Extension Center, has reported that too much phosphorus may decrease the ability of mycorrhizal fungi to colonize rose roots. This is injurious to soil organisms and raises salinity.

The element potassium (referred to as potash) is used in its oxidized form $\left(\mathrm{K}_{2} \mathrm{O}\right)$. It builds resistance to low temperatures by promoting strong canes. It is the "builder" of plants by contributing to the manufacture and movement of sugars, starches and cellulose.

Secondary nutrients are calcium $(\mathrm{Ca})$, magnesium $(\mathrm{Mg})$ and sulfur $(\mathrm{S})$. They are needed in smaller amounts than "the big three," but they are as important for good plant health.


Among the many varieties of roses that thrive locally include Fragrant Hour, Crimson Bouquet and Midas Gold. Photo by Virgene Link-New / WSU Skagit County Extension Master Gardeners.

Micronutrients are needed in very small quantities only and are important for good plant development. Chlorosis is caused by a higher pH that inhibits the availability of iron in the soil. This is the most frequent micronutrient deficiency. If correcting the pH does not eliminate the chlorosis, add iron in some form.

A good soil test will detail all these nutrient and pH levels and make recommendations for your garden area. Amend your soil at the time of planting. Add compost if working in strictly clay soil or gravel/sand; otherwise plant in your native ground.

Fertilize around the first of May after any risk of frost. Timing depends on your particular microclimate. Fertilize again in mid-June and around the first of August. Avoid stimulating new growth at the end of the season and allow the plant to become dormant.

To help plants absorb nutrients and protect their roots from being burned, water roses the day before fertilization and again afterward. Gently work the fertilizer into the soil around the plant. Mulching helps to retain water and prevent weed growth. Spread a two-to-three inch layer between plants, but away from the stems. An organic mulch (such as compost, rotted manure, alfalfa meal/pellets, chopped leaves or bark) will break down and add nutrients to the soil.

Dried grass clippings are a good mulch as they are rich in nitrogen. Do not use grass clippings if you have used a "weed and feed" product - the herbicide could kill your plants! Not to mention the health hazards to insects, birds, wildlife, your pets and YOU.

Roses need lots of water to a six-inch depth. Water in the morning. Use no overhead watering to prevent disease and minimize evaporation. (If you want to wash off aphids or spider mites, the leaves will have a chance to dry.)

At the end of the season, leave a few hips on the roses. This will help the plant recognize that it has done its job and made seed, so it can now go dormant.

## VARIETIES OF ROSES

- Species Roses---the original wild roses
- Heirloom---also known as old garden, antique, or heritage; are easy to grow and hardy; have come through centuries of wild and cultivated growth
- Hybrid Tea---are 4-5 ft. tall, usually with one flower on a long stem; are repeat bloomers and always grafted
- Polyantha---a cross between multiflora and hybrid teas, 2-5 ft. tall and many-flowered; a precursor to the floribundas
- Floribunda---has many small flowers in clusters; are about 3 ft . tall with more disease resistance than hybrid teas; usually grafted
- Grandiflora---can be up to 6 ft . tall with many blooms resembling smaller hybrid tea flowers
- Miniature---resemble small hybrid teas with proportional tiny flowers and are usually on their own roots (not grafted)
- Climber/Rambler---can grow from 6-20 ft. on supports
- Shrub---tidy to sprawling and ideal for hedges
- Tree---can be any rose grafted onto a tall trunk or standard


Left: A James Galway Rose produces large, double flowers, full of many neatly arranged petals. Photo by Virgene Link-New / WSU Skagit County Extension Master Gardeners.

## RESOURCES:

- Better Homes \& Gardens. ROSES ISBN:0-696-21178-5.
- How to Grow Roses. Sunset. Library of Congress 72-92510.
- All About Roses. Ortho Books. 0-89721-217-7.
- www.bhg.com/solving rose nutrient problems. Linda Chalkeer-Scott. Puyallup.wsu.edu/roses \& phosphate.
- 2,4-D PMEP. Home: Cornell University. <pmep.cce.cornell.edu>2m4_D to Caplan

