

## Where There Is Healthy Soil, Bigger Rose Bushes Grow. Some Tips

Leimone Waite, Master Gardener, May 24, 2019

**Q.** I read that I should add a half a cup of Epsom salts to each of my rose bushes each spring for bigger and brighter blooms. Is this true? Are Epsom salts really good for my soil and roses?

**A.** Epsom salts are made up of magnesium sulfate, and plants need both magnesium and sulfur for amino acid formation and other important functions within the plant. However, it's not a good idea to add any concentrated mineral supplements to your soil without having it tested for deficiencies. The only exception to this would be the addition of nitrogen, and in some cases phosphorus and potassium.



Close-up of pink roses. (Photo: Gabriele Ritz/EyeEm, Getty Images/EyeEm)

Adding Epsom salts to your garden soil when it already has an abundance of magnesium, as many of our clay soils do, could cause the soil to become “tight” and limit plant growth. Clay soils that are tight have poor water drainage and air movement within the soil, making root development and mineral uptake difficult. A ratio of too much magnesium to calcium in the soil can also tie up calcium, making it unavailable to the plant. It may also cause problems with nitrogen availability, increasing the need for nitrogen to be added by about 20%.

With that said, adding Epsom salts can be beneficial if your soil is deficient in magnesium.

The symptoms of magnesium deficiency in plants appear in older leaves, which show yellowing leaf edges and eventually nearly white veins while the rest of the leaf remains green — a “Christmas tree pattern,” as the University of California, Davis Integrated Pest Management site describes it. These deficiencies usually happen where the soil is acidic, and neutralizing the pH of the soil with dolomite lime will oftentimes take care of the magnesium deficiency without the need for added magnesium. Only if a large number of leaves are showing deficiency symptoms would one spray with a dilution of Epsom salts ( $MgSO_4$ ) and then in a ratio of one or two tablespoons to a gallon of water.



Grass clippings can reduce your need for fertilizer since they're rich in nitrogen and organic material. (Photo: Getty / capecodphoto)

You may also see deficiencies in sandy soils. In these type of soils you may see a real difference in the health of your roses by adding some Epsom salts.

Plants can also benefit from additions of sulfur if they're deficient, but too much sulfur can make the soil pH acidic and cause other nutrients to become unavailable. The bottom line is that it is best to test your soil before applying

any nutrients other than the big three — nitrogen, phosphorus and potassium — unless you're seeing signs of deficiency. The good news is that if you enrich your soil with organic matter like finished compost, well-rotted manure, etc. several times a year, you can grow healthy plants without the

addition of anything but nitrogen. Most of our native soils, with the addition of organic matter, contain all the nutrients needed for a healthy garden — except nitrogen. Because our hot summers break down organic matter, nitrogen needs to be replaced each year to maintain healthy garden soil.

*The Shasta Master Gardeners Program can be reached by phone at 242-2219 or email [mastergardener@shastacollege.edu](mailto:mastergardener@shastacollege.edu). The gardener office is staffed by volunteers trained by the University of California to answer gardeners' questions using information based on scientific research.*