

Science of Gardening



“My mother-in-law said that Epsom salts were good for the tomatoes.”

Most people think of Epsom salts as a foot soak or laxative, but you can also find Epsom salts in quite a few garden sheds.

Epsom salts are a naturally occurring mineral—known as *epsomite*, or *hydrated magnesium sulfate* ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$). Discovered in 1695 in the well water of Epsom, England, this bitter-tasting salt also appears as crusts in mines and limestone caves.

The key ingredient in Epsom salts, as far as plants are concerned, is magnesium. Magnesium is one of the six plant *macronutrients*, elemental nutrients required by plants in relative abundance, along with nitrogen, phosphorus, potassium, calcium, and sulfur. Adding Epsom salts can correct for a soil that is deficient in magnesium, sometimes evident by yellowing between the green veins of leaves. Magnesium also acts as a hormone trigger to encourage flowering in tomato plants, rose bushes, and flowering shrubs.

If you want to try Epsom salts on your own garden, tomatoes, peppers, and rose bushes should be your most likely targets, because they have a high demand for magnesium. In the springtime, try mixing one tablespoon of Epsom salts into one gallon of water, then either adding this mix to the soil or spraying it directly on plants. Be careful not to overdo it: An overdose of magnesium can be toxic to some plants. If in doubt, use a soil test kit to determine your soil's magnesium level.



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