EPSOM SALTS



Who isn't nostalgic about the 1980s – the era of mullets, electro pop, family sitcoms and, of course, acid rain? The *Nine O'Clock News* would show the ecological devastation that sulphuric acid raining down from the sky had on forests and waterways across the world. Yet the decline over the past 30 years in the emissions of toxic sulphur dioxide in air pollution that once caused this phenomenon has had an enduring impact on British soils, with far-reaching effects on agriculture and even our gardens — and not always a positive one.

Sulphur is a key plant nutrient vital to healthy growth, but UK soils are naturally deficient in this essential mineral. Back in the 1980s, this was of little concern to growers, as these levels were continually topped up by "atmospheric deposition", ie acid rain.

Fast forward to 2017 and what a difference! A small survey conducted over 2014 and 2015, for example, found that only 13% of the crops sampled showed sulphur levels in the "normal" range, with the rest registering as low or slightly low. This is a concern, as inadequate sulphur levels have been shown to slash farm yields of some (but admittedly not all) crops by as much as 50%. Surprising as it may seem, even acid rain clouds can have a silver lining.

As many plants also use sulphur pulled up from the soil to generate defence compounds to help ward off pests and diseases, this deficiency can also result in weak, vulnerable crops that require higher pesticide applications. These defence compounds also happen to be the exact same chemicals that give vegetables such as onions, garlic, broccoli and sprouts, their characteristic flavour and associated health benefits. If you've heard about the antioxidants in broccoli and garlic, it's the sulphur chemicals, derived from the soil, that are doing the work.

If you suspect your soil is sulphur-deficient, there is a simple solution that offers all of the benefits without the damaging acidity: **Epsom Salts (Magnesium Sulphate)**. This naturally occurring mineral combines both sulphur and another essential plant nutrient, magnesium, in a double whammy and can be bought for minimal cost at any garden centre and, of course, our Trading Centre. Simply sprinkle over the ground according to package directions for higher yields of tastier and more nutritious crops.

Although magnesium and sulphur occur naturally in soil, they can be depleted by various conditions, including heavy agricultural use. But unlike most commercial fertilizers, which build up in the soil over time, Epsom Salts does not persist, so you can't overuse it.

Why Epsom Salts work in the Garden

As Spring draws near, some of the country's top gardeners recommend using Epsom Salts as an inexpensive way to start or improve your garden.

Epsom Salts help seeds germinate, make plants grow bushier, produce more flowers, increase chlorophyll production and deter pests, such as slugs and voles. They also provide vital nutrients to supplement your regular fertilizer.

Plants will show visual signs if they are starved of a particular nutrient: If a plant's leaves turn yellow all over the plant, it can be a sign they need more sulphate. If lower leaves turn yellow between the veins (that is the veins stay green), they may need more magnesium.

Epsom Salts are recommended by Master Gardeners and used regularly by commercial growers around the world. Tests by the National Gardening Association confirm that roses fertilized with Epsom Salts grow bushier and produce more flowers, and they also make pepper plants grow larger than those treated only with commercial fertilizer.

Here are some other tips for using Epson Salts in the garden:

- **Houseplants**: 2 tablespoons per gallon of water; feed plants monthly.
- **Roses**: 1 tablespoon per foot of plant height per plant; apply every two weeks. Also scratch 1/2 cup into soil at base to encourage flowering canes and healthy new basal cane growth. Soak unplanted bushes in 1 cup of Epsom Salts per gallon of water to help roots recover. Add a tablespoon of Epsom Salts to each hole at planting time.
- **Shrubs** (evergreens, azaleas, rhododendron): 1 tablespoon per 9 square feet. Apply over root zone every 2-4 weeks.
- **Lawns**: Apply 3 pounds for every 1,250 square feet with a spreader, or dilute in water and apply with a sprayer.
- **Trees**: Apply 2 tablespoons per 9 square feet. Apply over the root zone 3 times annually.
- **Garden Startup**: Sprinkle 1 cup per 100 square feet. Mix into soil before planting. But a word of warning: do not use where you are growing **Sages**, as they do not like Epsom Salts.

The Epsom Salt Council (http://www.epsomsaltcouncil.org/) also advises on Health and Beauty remedies relating to muscle ache, sunburn, treating colds/flu amongst other things, so you may find that you get through a box of Epsom Salts faster than you anticipated!