

March 31, 2013 **Feed The Soil** Scripps Howard News Service/Mail Tribune article  
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Many gardeners who contemplate going organic fall prey to the marketing hype of the big print on the package to make purchasing decisions. Although helpful in directing you to using something that could produce the desired outcome, it may not be what you really intended to put into your soil. Here's a closer look.

### **ORGANIC NUTRIENTS**

Here is a partial listing of the most commonly available organic nutrients sorted by their role for providing nitrogen, phosphorus or potassium.

**Nitrogen:** Dried blood, blood meal, cottonseed meal, fish emulsion and seaweed extract

**Phosphorus:** Bone meal, rock phosphate

**Potassium:** greensand, sulfate of potash

These natural amendments feed the soil, which in turn feeds the plants. Make that formula part of your gardening protocol, and you'll be well on your way to a safer and more environmentally responsible approach to gardening.

### **Organic vs. nonorganic choices**

All plants receive nutrients in chemical form. They cannot distinguish between how the nutrient was derived, whether organic or nonorganic. When referring to plant nutrition, "organic" or "natural" generally refers to any fertilizer with a plant, animal or mineral base. It must have one or more essential nutrients for plant growth.

Nonorganic fertilizers — also known as synthetic — are manufactured. They are made to deliver nutrients rapidly, such as those that are water-soluble, or over time as a controlled release. Although very effective for providing rapid or prolonged periods of feeding, these have a high salt index. The potential risk to plants, the soil food web and environment includes burning and dehydration, and the leeching of unabsorbed chemicals into watersheds.

Organic nutrients, on the other hand, must be broken down and digested by soil microorganisms, which then release these nutrients in a form available to plants while improving soil structure. Unlike water-soluble synthetics, organic nutrients bind to soil particles and are less likely to leech. The net result is nutrients that remain in the soil until utilized by plants and little risk of burning or dehydration, even in periods of extreme drought or over-application. You could sum it up by one gardening truth: Feed the soil, and let the soil feed the plants. That happens only when you build your soil health with organic amendments.

### **Fertilizer basics**

Look at any fertilizer package and you'll find three numbers listed. These are the primary nutrients that are needed in the greatest quantity by the plants. These numbers represent the percentage by weight of nitrogen, phosphorus and potassium found in each package. Nitrogen (N) is primarily responsible for vigorous growth and a dark-green color. Phosphorus (P) plays an important role in root development and flowering. Potassium (K) helps with disease resistance and the overall hardiness of the plant.

What you are trying to achieve for a plant's growing success should determine which fertilizer to buy. Organic alternatives have lower ratios by weight, so it would take more to achieve the same nutrient level by volume. But unlike water-soluble synthetic fertilizers, organic nutrients stay in the soil, so less is needed.

### **Organic alternatives**

Synthetic, manufactured, chemical fertilizers are listed by their letters — for example, N for nitrogen, P for phosphorus and K for potassium. Organic alternatives, however, are often listed primarily by what they actually are, such as blood or bone meal or rock phosphate. Yet somewhere on that package, you'll find the three important numbers. They are the key to knowing what role that product will play in your garden.