University of Nevada Cooperative Extension

Fertilizers

Almost everyone who takes care of a plant eventually purchases or receives a container of fertilizer. There are many different brands and formulations, but a large number of them are "all purpose" or "general purpose".

While these terms may be convenient, they are not terribly informative. They really mean that the products are appropriate to use on most plants. Others fertilizers have more specific descriptions, indicating that they have been designed for use in special situations, such as on cacti, or to give a boost to a plant when it is blooming, or to increase yields when the gardener is looking for a definite product, like tomatoes.

No matter what the intended use is, however, most packages have the same important guide – three numbers that often appear on the front, but occasionally on the back labels.

The three numbers represent the percentages of the major elements in the product: nitrogen, phosphorus, and potassium. Fortunately for everyone who uses fertilizers, the elements are always listed in that order. Even when the fertilizer does not contain one of them, the label will use a zero to note that fact. Rather than using the element's whole name, the label may instead use its chemical symbol: N for nitrogen, P for phosphorus and K for potassium. The fertilizer probably contains many other essential nutrients, but plants usually require these three in the largest amounts.

Some packages use the term "plant food", although this is a misnomer. Plants make food; fertilizers are more akin to the vitamins that people take to supplement their diets. In the wild, plants obtain necessary minerals from the soil and the compost it contains. Indoor plants in pots, however, or landscape plants that are struggling to survive under Mojave Desert conditions, often need the extra assistance that can be found in a fertilizer package.

It is possible to purchase a number of products that have been derived from organic sources such as fish emulsion, bat guano, or blood meal. Usually these have not been treated with commercial pesticides. For some gardeners, this is a major consideration, particularly when they are growing edible garden plants. Organic products generally have lower concentrations of mineral nutrients, and are in forms that plants can metabolize more slowly and consistently. This is probably closer to the way plants receive nourishment in the wild, slowly breaking down soil compost and incorporating the usable fractions for growth.

Houseplants are a different story. Most houseplants have become accustomed to conditions considerably different from those in the wild – particularly if they are living in pots. In the nurseries where they originally grew, they probably received large amounts of water-soluble fertilizer routinely. Plants in many houses or offices might be sitting in the same tired

soil for years, until there is virtually no nourishment left in it. Without fertilizers, they would be in dire conditions.

Whether it is from a slow-release organic or a water-soluble formulation, plants are not too fussy about the source of their nutrition, as long as they obtain the minerals they need for survival.

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