

What is N-P-K?

Every container of granular or liquid plant food has a set of three numbers on the label: the N-P-K ratio, also known as the “guaranteed analysis” or the guarantee of how much of these three nutrients will be in the product.

What does N-P-K Stand For?

N-P-K stands for Nitrogen (N), Phosphorus (P) and Potassium (K). These three elements are the three primary nutrients that plants need in the largest quantities. All plant food or fertilizer products must have an N-P-K ratio on the label.

The numbers tell you the percent of each nutrient that's present in your plant food. For instance, 12-4-8 means the plant food has 12% nitrogen, 4% phosphorus and 8% potassium. Some plant foods may not contain one or more of these nutrients (represented by a "0" in the ratio). Complete plant foods have all three macronutrients, and balanced plant foods have an equal ratio (for instance, 10-10-10).

Nitrogen

Nitrogen makes plants green and helps them grow. It's a major component of chlorophyll, the compound that gives plants their green color and helps them harvest light from the sun to convert into energy.

Phosphorus

Phosphorus is key for energy production in plants. It is needed for root growth as well as flower, fruit, and seed development.

Potassium

Potassium helps your plant survive stressors like drought, frost, insects and diseases. It's involved in many plant processes and helps support the all-around health of your plant.

What plant food is right for your plants?

Typically, a 3-1-2 N-P-K ratio is considered ideal for most plants, like the 24-8-16 ratio of [Miracle-Gro® Water Soluble All Purpose Plant Food](#), but this can vary based on the type of plant or its stage of growth. For instance, flowering plants need more phosphorus during their blooming season and benefit from [Miracle-Gro® Water Soluble Bloom Booster® Plant Food](#) (15-30-15). Young transplants also benefit from a boost in phosphorus to improve root growth, making the 4-12-4 ratio of [Miracle-Gro® Quick Start Planting and Transplant Starting Solution](#) a great choice.