



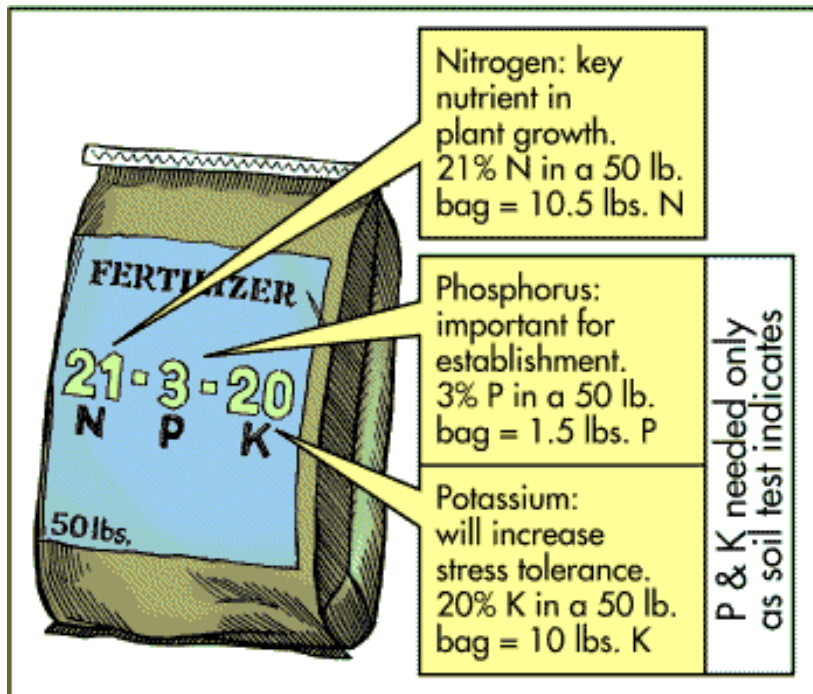
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Lawn Fertilization:

Everyone wants a healthy lawn and though lawns get nutrients from the soil they often need a little help during the growing season. Fertilizer can help your lawn stay healthy, encourage leaf and root growth, reduce troublesome weeds, aid in recovering lost nutrients and help the lawn recover from numerous activities.

Fertilizers are organic or inorganic materials that are applied to the soil or the plant to improve its health and provide sufficient mineral nutrient elements. Plants obtain three of the essential elements they need for growth - carbon, hydrogen and oxygen - from water and the carbon dioxide in the air. The other nutrients plants need are found in the soil and absorbed by the plant's root system. These nutrients are grouped into two categories, macronutrients and micronutrients.

*There are three main **macronutrients** - **nitrogen (N)**, **phosphorus (P)** and **potassium (K)**.*



***Nitrogen** promotes rapid growth, leaf development, chlorophyll formation and protein synthesis.*

***Phosphorus** plays a key role in early root growth, hastens maturity, and stimulates blooming and aids seed formation.*

***Potassium** increases resistance to drought and disease and also plays a part in root growth as well as in stem development.*

You will find the NPK content in the description printed on the front of bags of fertilizer. The description may not expressly say "NPK" (it may simply be implied), but you will at least see a series of three numbers, which correspond, respectively, to the nitrogen, phosphorus and potassium content of the fertilizer. They are always listed in that order.

Along with N, P and K, any of the other nutrients contained will be listed on the fertilizer label. The numbers shown for each nutrient give the percentage, by weight, of that nutrient compared to the total contents of the bag. Macronutrients are essential for plant growth and needed in relatively large amounts by plants. NPK are among the macronutrients along with calcium (Ca), magnesium (Mg), and sulfur (S).

***Micronutrients** also are essential for plant growth, but are needed in minute amounts. The micronutrients are: boron (B), copper (Cu), iron (Fe), chloride (Cl), manganese (Mn), molybdenum (Mo) and zinc (Zn). The fertilizer may contain some of these other nutrients, as well as NPK. You'll find a more detailed breakdown of the fertilizer's contents on the fertilizer label. The two most important pieces of information here are the guaranteed fertilizer analysis and the type(s) of nitrogen the fertilizer contains. The types of nitrogen listed indicate which are a quick-release or a slow-release*

form of N. Along with N, P and K, any of the other nutrients contained will be listed along with the numbers that give the percentage, by weight, of that nutrient compared to the total contents of the bag.

Fertilizers - Quick-Release and Slow-Release Nitrogen

What's the difference?

There are two basic types of nitrogen sources contained in lawn fertilizers - slow-release and quick-release - and it's important to know the pros and cons of both.

Quick-Release:

Quick-release nitrogen in fertilizers is useful because the nutrients are immediately available to plants. This water-soluble nitrogen (WSN) becomes available when it is dissolved in water, either through irrigation or rainfall, when it is applied. There are several benefits of quick-release fertilizers - nutrients are immediately available to plants and they stimulate quick shoot growth and greening.

On the down side, they rapidly deteriorate from the soil through the leaching of nitrates; they last only two to four weeks; and if they are over applied they can cause burning to the grass plant.

Slow-Release:

There are several benefits of slow-release nitrogen in fertilizers. They provide more uniform grass growth. They are less likely to burn the lawn or other plants. They can last 6 to 8 weeks or longer so they don't need to be applied as frequently as fertilizers with quick-release nitrogen.

On the downside, nutrients are not immediately available to plants. They are generally more expensive per pound than quick-release fertilizers. They may not work as well in cold soil. They require heavier irrigation during periods of high temperatures and too much irrigation may speed-up the release of nutrients. The fertilizer bag will include details on when and how to apply the product.

Proper application:

Apply the fertilizer with either a drop or broadcast spreader.

A **drop spreader** delivers the fertilizer to the lawn through an opening at the bottom of a spreader hopper. The fertilizer is evenly spread across the width of this opening.

A **broadcast spreader** has a spinning device just below the opening at the bottom of the spreader hopper. Fertilizer is spread across a wider area of the lawn by the rotary action of the spinning device.

Each type spreader will have an application dial or other device that allows you to set the amount of fertilizer that moves through the opening.

Lawn fertilization Program:

- *Pre-emergent & Fertilization*
- *Pre & Post Emergent*
- *Weed and Feed*
- *Summer Fertilization*
- *Grub & Insect Control With Fertilizer*
- *Fall Feeding*
- *Winterize Feeding*
- *Lime Application*

We are more than please to answer questions from any of our current and new customers about lawn Fertilization Program and maintenance. Please contact us anytime. Thank you.

