Understanding How to Determine the Nitrogen Value in Blended Fertilizers

Nitrogen is the leading source of nutrition in blended fertilizers that are applied to maintain healthy turfgrass growth. It is important to understand how to correctly determine the amount of nitrogen in a fertilizer bag and what percentage of the nitrogen source is an enhanced efficiency fertilizer (EEF) technology. These insights can be very beneficial when you're deciding which fertilizers to buy and apply.

Grade (Analysis)

Every fertilizer bag label has a grade that includes three numbers separated by hyphens. This example shows the percentages of nitrogen (N), phosphorous (P) and potassium (K) by weight in the bag of fertilizer.

27-0-5
N P K

N A key element in the growth rate of turfgrass and significantly contributes to its green color.

P Helps to stimulate early root development, plant growth and accelerates maturity.

K Increases turfgrass vigor, helping in its tolerance to drought, heat, disease and other stress factors.

These numbers are often misunderstood. They represent the **percentages** of each component in the fertilizer blend.

Percentages to Pounds

To calculate the pounds of each component, multiply the total pounds of the bag by the percentage of each one listed on the grade. Using the 27-0-5 grade, here is the calculation to find the pounds of N in the bag (example below – 50 lb. bag).

$$50 \times .27 =$$

13.5 lbs. of N

Based on the example, a customer using the application rate of one pound of N per 1,000 sq. ft. could quickly figure out that one bag covers 13,500 sq. ft.

Knowing how to calculate the pounds of each component makes it easier to figure out how many bags of a particular fertilizer you'll need to meet your application requirements.

Calculating the Percentages

27-0-5

GUARANTEED ANALYSIS

On bags of blended fertilizer, there will be a **Derived from Statement** that is part of the **Guaranteed Analysis**. Here, you will find a percentage and source of enhanced efficiency nutrient (controlled-release, slow-release, stabilized) claimed in the bag. This percentage is also often misunderstood.

Derived from: Urea, Polymer Coated Sulfur Coated Urea and Sulfate of Potash. *16.2% Slow-Release Nitrogen from Polymer Coated Sulfur Coated Urea.*

In this example, 16.2% of the fertilizer in the bag is slow-release nitrogen.

To calculate what percentage of the total N is slow-release, divide the %SRN by the %N.

$$(16.2 \div 27) \times 100 =$$

60.0% Slow-Release N

The Key Takeaway

60% is a relatively high percentage of slow-release N. You should be looking at a minimum of at least 50% to gain more of the advantages enhanced efficiency technologies provide to save time and money, optimize labor and reduce operational expenses. The higher the percentage the better, because that's how you can achieve the best cost-in-use value, and that's A Better Way to Fertilize.™