

K-MAG BRIEFS™

Brought to you by IMC Global — Producers of Quality Crop Nutrients

For High-Yielding, High-Quality Alfalfa

3-in-1 combination of K, Mg and S promotes balanced nutrition

Supplies a readily-available source of nutrients

Maintains soil pH

A frequently harvested crop, alfalfa demands intensive fertility management and high nutrient levels. Many producers may not be aware that high alfalfa yields quickly deplete soil nutrient supplies, particularly potassium (K) and phosphorous (P). Acidic soils also are a typical concern of continuous alfalfa production, especially since nitrogen-fixing bacteria associated with alfalfa do not survive at low pH levels. Therefore, alfalfa needs a fertilizer it can depend on to replenish nutrient levels, without contributing to increased acidity.

A product of mineral earth extracted from deep below the New Mexican soil surface, K-Mag is a 100% natural source of potassium (21-22% K₂O), magnesium (10-11% Mg) and sulfur (21-22% S) — essential nutrients for crop plants.

Each nutrient plays a critical role in alfalfa production:

Potassium (K)

At an average K removal rate of 60-70 lb K₂O/ton of harvested hay, alfalfa removes five times as much K compared to P. Given its importance in plant functions, such as photosynthesis, root growth and disease resistance, K can easily become a limiting factor of productivity if not properly supplied. In addition, K deficiencies can pave the way for early establishment of broadleaf weeds and grasses compared to more fertile fields.

Magnesium (Mg)

An important concern with increased K fertilization is reduced Mg uptake. Without Mg, photosynthesis is impossible. As rates of photosynthesis decline, so do

quality and yield. Mg remains the center of many complex nutrient relationships. While Mg promotes P absorption, high K rates can actually inhibit plant uptake of Mg. Using K-Mag in a fertilizer program will help maintain a proper balance between these essential nutrients.

Sulfur (S)

Sulfur is essential for the bacteria living on alfalfa root nodules to fix N. It also is an important component of plant proteins. A ton of alfalfa hay requires about 5 lbs of S. Soil S levels often are overlooked, but in high-yielding situations, the levels must be maintained for ample N fixation and quality yields.

Nutrient Removal (lb/A) by Alfalfa

Yield (ton/A)	N	P ₂ O ₅	K ₂ O	Mg	S
6	338	90	360	30	30
10	500	150	600	50	50

Summary of Benefits

K-Mag is a premium fertilizer choice that, in addition to potassium, supplies other essential nutrients, like Mg and S, often overlooked by traditional N-P-K programs. Sulfur may even improve disease resistance.

K-Mag is virtually 100% water-soluble and is immediately available to alfalfa roots. Yet, granular K-Mag dissolves slowly.

K-Mag eliminates any chance of fertilizer burn since its unique traits include low chloride levels and a low salt index.

As a neutral salt, K-Mag boosts yields without decreasing soil pH.

Typical broadcast rates are 150-300 lb/A, but soil analyses should direct usage. Additional K may be required.

If your crop needs a boost in yield and quality, it may be time to incorporate the balanced nutrition of K-Mag into your fertilization program. Contact us today to learn more about K-Mag.

