



Higher yields are available with K-Mag[®] fertilizer



K-Mag benefits

Supplies essential nutrients often overlooked by traditional NPK programs

Virtually 100% water-soluble – K, Mg and S are immediately available to crops

No risk of fertilizer burn thanks to low chloride levels and a low salt index

Helps boost yields without affecting soil pH

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

Why K-Mag?

The shortage of just one essential nutrient can shortchange alfalfa yields and profits. Growers can optimize yields and maximize profits by providing a balanced soil fertility program that ensures all 17 essential nutrients are available to plants.

K-Mag fertilizer provides three essential nutrients in the highly available sulfate form. Available in PREMIUM, GRANULAR and STANDARD grades, K-Mag provides 21-22% potassium (K₂O), 10.5-11% magnesium (Mg) and 21-22% sulfur (S).

Also known as langbeinite, potassium magnesium sulfate, or double sulfate of potash, K-Mag is sourced from ore beds deep beneath the earth's surface, where an isolated lake of ocean water once existed. Langbeinite, an evaporite mineral, is one of the most soluble salts in the ocean.

Increase alfalfa yields

Good soil fertility and proper soil pH are two of the most important factors impacting alfalfa yields. Continuous alfalfa production can rapidly deplete the soil of nutrients. Plus, proper soil pH ensures nitrogen-fixing bacteria can thrive. Supplying essential nutrients without increasing soil acidity, K-Mag can dramatically boost alfalfa yields and profits. In fact, field trials in California in 2002 showed that K-Mag can net returns of up to 400%. In nine trials across the Joaquin Valley, one-half to one-ton yield increases in alfalfa were

measured – an average 22% spike – regardless of soil type or management practice. A \$50 per acre investment in K-Mag provided an incredible \$200 return.

Potassium (K)

Potassium is the major nutrient required by alfalfa. In fact, alfalfa requires 10 times more K than P; each ton of harvested alfalfa removes about 60 lbs/A of potash. Low K soil test levels often are an underlying cause of winter kill, and early establishment of broadleaf weeds and grasses compared to more fertile fields. Proper K fertilization contributes to key plant functions, such as photosynthesis, root growth and disease resistance, all of which improve the vigor and yield of the alfalfa plant.

Magnesium (Mg)

High K rates can inhibit plant uptake of Mg, a nutrient that is central to photosynthesis. Many soils may test high in Mg, but the Mg may not be available to the plant. While dolomitic limestone is a good source of Mg, it has limited solubility and may not become available to the alfalfa crop fast enough to overcome deficiency problems. K-Mag supplies Mg in the readily available, water-soluble sulfate form, as well as in the right balance with K.

Sulfur (S)

Correcting an S-deficient soil has been shown to increase alfalfa yields by up to 1 ton/A. Topdressing S in the sulfate form helps ensure S is immediately available to plants. S is essential for the bacteria living on alfalfa root nodules to fix N. It also is an important component of plant proteins. On a dry matter basis, one ton of harvested alfalfa hay removes about 6 pounds of S.

Pounds of nutrient removed per ton of alfalfa, dry matter basis

Nutrient	Alfalfa dry matter (lb/ton)	Nutrient	Alfalfa dry matter (lb/ton)
Phosphorus*	6	Zinc	0.05
Potassium*	49	Manganese	0.12
Calcium	30	Copper	0.01
Magnesium	6	Molybdenum	0.002
Iron	0.33		
Sulfur	6		
Boron	0.08		

**Plants may remove higher amounts of these nutrients if soil test levels are in the high or excessively high range. Source: University of Wisconsin-Extension*

Ensure your alfalfa crop has all the nutrients it needs to thrive. Contact us today to learn about adding K-Mag to your balanced soil fertility program!

kmag.com



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