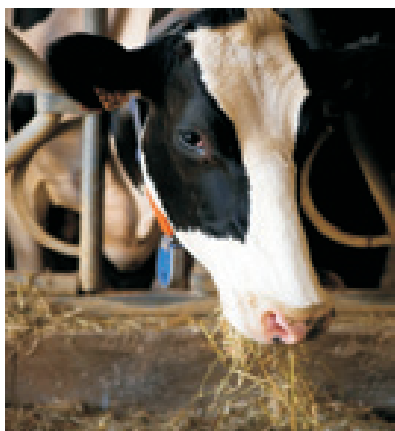




### **Protect Against Grass Tetany with Healthy Forages**



#### **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.*

Grass tetany is a serious, often fatal metabolic disorder characterized by low levels of magnesium (Mg) in the blood serum of ruminant animals, such as cattle, goat and sheep.

Displaying rapidly progressing symptoms, affected animals become uncoordinated and extremely excitable, leading to vicious behavior and convulsions. Coma typically results within six to 10 hours after convulsions commence, and death is common within days.

While experts agree that grass tetany is not always a simple case of Mg deficiency, this costly disease commonly occurs in animals that are fed forages low in Mg content.

#### **Balanced soil fertility is first step**

A soil fertility program that maintains a proper balance of all the essential nutrients is the first step toward grass tetany prevention.

While Mg deficiency is a common denominator in grass tetany, other nutrients play a role. For instance, without sufficient phosphorus (P), grass tetany may result even if soil Mg is adequate. P promotes the uptake of Mg and calcium (Ca) as its levels are increased and the two nutrients move to the leaves. In a three-year research study of the influence of P on potassium (K), calcium (Ca) and Mg concentrations in ryegrass and Coastal Bermuda grass, applied P increased tissue Mg concentrations. Applying P and Mg may not completely alleviate the potential for grass tetany, but applications of both nutrients may help correct the problem.



## **K-Mag provides available Mg**

K-Mag is a three-in-one fertilizer commonly used by producers to promote the growth of healthy, productive forages and reduce the risk of grass tetany.

K-Mag supplies Mg, along with K and sulfur (S), in the readily available, water-soluble sulfate form – and in the appropriate balance. Available in PREMIUM, GRANULAR and STANDARD grades, K-Mag provides 21-22% potassium ( $K_2O$ ), 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.

### **Management considerations**

Regular soil testing can help identify soil nutrient deficiencies in the soil before they become problematic.

Plant magnesium (Mg) levels of 0.2 to 0.25 percent tissue dry matter are considered safe and will help prevent grass tetany. Most investigators have accepted the level of 0.2 Mg unless K is present at a high level.

Although grass tetany can occur at any time of the year, it is most common in spring when warmer weather prompts a fast flush of vegetative growth. If necessary, animal feed should be supplemented with mineral sources of Mg. Adding hay or silage to feed during winter or early spring pasture is another good practice.

For more information on proper soil fertility and fertilizer, visit [back-to-basics.net](http://back-to-basics.net).

Contact us today to learn about adding K-Mag to your balanced soil fertility program!

***[kmag.com](http://kmag.com)***



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