



# KMS

## Potassium Magnesium Sulfate

High-yielding crops need ample nutrition to thrive and reach their maximum potential.

Crop success often is measured in yield, but quality factors like grain fill, color, weight, firmness, size and general appearance are subjective traits that can exponentially increase the value and profitability of any given crop.

Increasing crop quality and overall performance requires a complete and balanced soil fertility program that supplies not only needed N, P and K, but the “secondary” nutrients, like sulfur (S) and magnesium (Mg), and micronutrients. KMS fertilizer conveniently provides Mg and S, along with K, in each value-packed granule.

KMS is nature's unique and perfectly balanced source of K, Mg and S. KMS fuels quality and yield by supplying a unique and perfectly balanced package of three essential nutrients – K, Mg and S – in the highly available water-soluble sulfate form:

**POTASH (K<sub>2</sub>O)** – K is known as the “quality” nutrient. A good source of K, KMS promotes healthy root systems, increases plant vigor and resistance to disease and cold. K is also essential in sugar and starch formation, and the movement of nutrients through plants.

**MAGNESIUM (Mg)** – Mg is the central component of chlorophyll, the pigment molecule responsible for absorbing

sunlight during photosynthesis. Providing Mg and K in the proper balance, KMS helps increase plant strength and builds resistance to winter kill, drying, insect attack and spray damage.

**SULFUR (S)** – S helps build proteins in plants and is a key component of many unique traits. S puts the “green and leafy” into crops like spinach, while giving garlic and asparagus their distinctive flavors and improves the baking quality of wheat. S deficiencies are of particular concern as sulfur dioxide emission-reduction programs cause less S to be returned to the soil via the atmosphere. KMS provides an adequate supply of S for healthy crop production.

Because it's in the sulfate form, it aids initial root growth – important in rapidly growing crops – and promotes seed production and vigorous plant growth.

**High performance with KMS** - Potassium, magnesium and sulfur are continually removed from the soil by high-yielding crops and, in the case of S and Mg, often are not replaced by many of today's high analysis fertilizers.

Severe to moderate deficiencies of K, Mg and S are present in nearly every major crop-producing area. Heavy cropping practices, erosion and leaching all contribute to shortages.

KMS provides three essential nutrients in the proper balance, helping to ensure that nutrition is not a limiting factor in achieving top performance.



*A balanced soil fertility program begins with regular soil testing to identify deficiencies and continues with field scouting, plant tissue analysis and good record-keeping to monitor trends. Crops thrive on a good supply of all the essential nutrients. KMS helps supply three nutrients in the highly available sulfate form.*

## Five more reasons to use KMS

### **Resists leaching**

Unlike many other magnesium sources, KMS is 100 percent water soluble. We grind it to a 200 mesh powder for fertigation or spray application. The solubility rate depends on its soluble chemical nature and its particle size. KMS goes to work immediately. Yet, KMS dissolves slowly, resisting rapid leaching from the soil.

### **Essentially chloride-free**

KMS's maximum chloride content is less than 3.0 percent, minimizing the potential for fertilizer "burn." Thus, it is widely used on sensitive vegetable and fruit crops requiring high fertilizer rates, and on other crops that have a high K and Mg demand and do not tolerate chloride well.

### **Provides balance of nutrients**

The deficiency of any essential nutrient limits crop yields and crop quality – even when all other nutrients are present in adequate amounts. KMS supplies K, Mg and S in a balanced proportion that fits the nutrient needs of many crops.

### **Does not change soil pH**

Regardless of application rate, KMS does not change soil pH because it is a neutral salt. Producers can apply with confidence.

### **Increases profit per acre**

Crop producers throughout the world have reported extra profit per acre with KMS, especially on Mg- and S-deficient soils. Exact dollar benefits from KMS applications depend on crop and cropping methods, soil type, degree of soil nutrient deficiencies, previous cropping methods, and climatic conditions during the cropping year.

KMS can be used as part of a complete fertilizer for the crop, or applied directly to the soil. Check with your Diamond K representative as to the best rates and application methods for your area.