K-Mag®

Turfgrass

# 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.*

International Minerals Carlsbad

## Why K-Mag?

The shortage of just one essential nutrient can shortchange turfgrass yield and quality. Growers can optimize turfgrass productivity 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 ($K_2O$), 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.

## Increase turfgrass yields

Proper soil fertility is arguably the most important management practice in improving and maintaining the quality of turfgrass. Providing the right nutrients, at the right rates, at the right times will help promote a dense, medium-to-dark green turf that resists pests, stands up to environmental stresses and improves wear tolerance.

**K-Mag provides three essential nutrients needed to produce excellent color, density and yield, and it never affects soil pH.**

*Potassium (K)*

Established turfgrass requires high levels of K. This nutrient enhances root development and branching, improves drought tolerance and cold hardiness by regulating the absorption and retention of water by plants, increases leaf turgor pressure, and reduces the incidence of numerous fungal diseases. Wear tolerance also has been shown to increase proportionally with the plant K levels.

*Magnesium (Mg)*

Mg puts the green in turfgrass. As the central component of chlorophyll — the pigment molecule responsible for absorbing sunlight during photosynthesis, Mg is responsible for bringing out and maintaining a desirable turfgrass color. Mg also influences phosphorus (P) mobility within the plant, and impacts shoot and root growth (see chart below). Because Mg leeches easily from sandy soils, turfgrass soils in the Southeast commonly test low to deficient in this essential nutrient. K-Mag provides a readily available soluble source of Mg, and it supplies K and Mg in the proper balance.

**Mg Effects on Shoot and Root Growth**

| | Shoot Weight (g) | | Root Weight (g) | |
|---|---|---|---|---|
| Species | +Mg | -Mg | +Mg | -Mg |
| Zoysia Japonica Tifgreen | 20.4 | 2.8 | 9.1 | 0.2 |
| Bermudagrass | 30.8 | 3.9 | 4.4 | 1.3 |

Mg deficiencies can result in lower shoot and root weights.

*Sulfur (S)*

S is present in certain amino acids, proteins, membranes and coenzymes. S encourages initial root development, which is beneficial to overall turf health, and helps protect against fungal diseases. S deficiencies often result in chlorosis. S shortages are common on sandy soils, and have become more widespread with the reduction in industrial emissions associated with 1990's Clean Air Act.

Ensure your turfgrass 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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