INTREPID Trio®

Alfalfa

Naturally Balanced Nutrition in Every Granule

Experience higher yields and balanced fertility in alfalfa by providing the right nutrients at the right rate, right time, and right place for maximum return. Intrepid Trio is natural langbeinite, a unique mineral with three essential nutrients comprised of 21.5-22% potassium (K_20), 10.5-10.8% magnesium (Mg) and 21-22% sulfur (S) as sulfates, depending on grade.

Intrepid Trio, also known as Sulfate of Potash Magnesia, allows growers to apply an extremely low chloride potassium (less than 1.0-3.0% Cl depending on grade) and neutral pH fertilizer with the benefit of sulfur and magnesium in the same ratio in each granule. Intrepid Trio is also OMRI Listed and approved for organic farming.

Available in premium, granular and standard grades, Intrepid Trio blends well with other fertilizer materials for an even distribution of nutrients.

Nutrient removal by alfalfa per ton of hay

N	P_2O_5	K_2O	Mg	S
lbs/ton	lbs/ton	lbs/ton	lbs/ton	lbs/ton
56	15	60	5	5

(source: International Plant Nutrition Institute)

When should Intrepid Trio® be applied?

Apply Intrepid Trio prior to seeding and incorporate into the seedbed. Following harvest, apply Intrepid Trio again to replenish nutrient removal. Instead of a single, heavy application that may lead to luxury (non-enhancing) potassium consumption by the alfalfa plant, choose to split applications over several cuttings to obtain the maximum benefit from the potassium.

OMRI LISTED For Organic Use

REGISTERED cdfa ORGANIC INPUT MATERIAL

INTREPID
1001 17th Street, Suite 1050 | Denver, CO 80202
www.intrepidpotash.com

INTREPID MADE & MANUFACTURED USA

INTREPID Essential Minerals for Success

Sulfur needs for alfalfa

<8 ppm critical sulfate-sulfur soil test level

Application	
Annually	20-40 lbs S/ac
Every Second Year	40-60 lbs S/ac

(Source: Gardner et al., 2000 and Koenig et al., 1999)

Is potassium (K_2O) application important for alfalfa production?

Adequate potassium in alfalfa leads to:

- Increased number of shoots per plant
- Enhanced nitrogen gas fixation
- Greater stand-survival persistence against weeds and winter kill

Alfalfa pulls the majority of its potassium from the surface soil. Deficiencies are usually characterized by small white or yellowish spots around the outer edge of the leaves and most prevalent where sandy soils predominate, low potassium irrigation water is used, or there is a history of long-term, high-yielding alfalfa production. Intrepid Trio, as part of a balanced fertility program, will help meet potassium needs for alfalfa plants.

How does potassium (K_2O) content in alfalfa affect livestock?

Ruminant animals have an essential need for potassium in their feed to prevent decreased feed and water intake, and utilization. Lactating dairy cows require potassium levels most often near 1% but as high as 1.9% if cows are under high heat stress. However, dry cows, calves, and heifers only need a maximum of 0.5-0.6% potassium in forages. Application of animal manures with high potassium rates on alfalfa can lead to excessive levels of potassium that can be detrimental to livestock. (National Research Council)

Are sulfur (S) and magnesium (Mg) needed for alfalfa production?

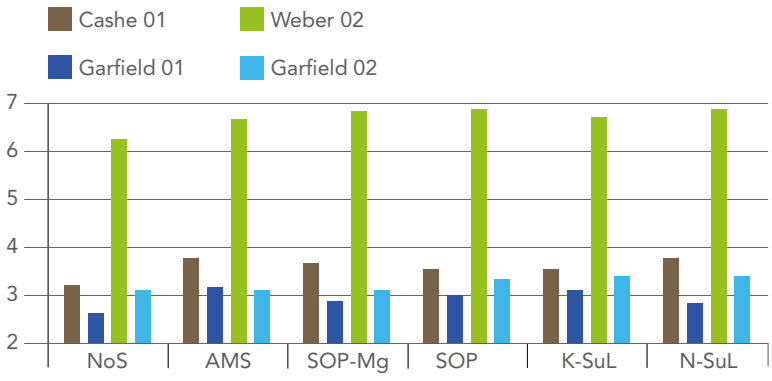
Sulfur functions as a component of amino acids and increases yields and stand density in alfalfa. Deficiencies have become more common with increased alfalfa yields, less atmospheric deposition of sulfur, and lower sulfur levels in high-analysis fertilizers. The sulfur in sulfate form as found in Intrepid Trio is the only form of sulfur readily available to plants.

Magnesium serves as a central component of the chlorophyll molecule, aiding the plant in photosynthesis. Cations such as calcium and potassium compete with magnesium for plant uptake, therefore applying a balanced fertilizer like Intrepid Trio is a key for promoting balanced fertility.

Intrepid Trio provides three essential minerals readily available as your crop needs them.

When will Intrepid Trio® be available to the alfalfa plant?

Intrepid Trio readily dissolves in the soil slowly, reducing the risk of leaching and providing long-lasting nutrients immediately available to the plant.



Sulfur Source
Effect of S source on alfalfa hay yield at two locations in 2001 and 2002.

(Source: Koenig et al., 2003)

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