



## Citrus

### Naturally Balanced Nutrition in Every Granule

Experience higher yields and balanced fertility in citrus fruit 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 ( $K_2O$ ), 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 1.5-2.5% 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.

#### When should Intrepid Trio® be applied?

Apply Intrepid Trio as a part of 3 split applications for the citrus crop: 1. After harvest is complete during the winter pruning season 2. Blooming and Fruit set in the spring and 3. Fruit development during the summer.

#### Potassium needs for Citrus (lb/ $K_2O$ /acre/year)

	Tree Age	
	4 – 7 years	8 and up
Oranges	120-200	140-250
Grapefruit	120-160	120-160

(Source: Univ. of Florida 2016)



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





### How does potassium (K<sub>2</sub>O) affect citrus fruit?

Potassium plays a vital role in citrus fruit aiding in protein synthesis, sugar formation and many enzyme reactions that affect almost every plant function. Through these processes, potassium positively affects yields through enhancement of the flavor, size, and weight of the fruit crop. Additionally adequate levels of potassium in the tree allow it to better weather extreme stresses such as cold, drought, disease etc.

Citrus trees exhibit potassium deficiency on older leaves at first with a yellowing of the tips and margins that then extends more broadly. Normal balanced fertilization will not induce a K deficiency, but high rates of N fertilizers can create one. It is important to always apply potassium at a rate equal to N on citrus.

Potassium deficiency in citrus fruit can cause...

- Thin canopy and reduced growth
- Reduced fruit acid content
- Damage more likely due to cold and drought
- Early fruit drop

### What effect does magnesium (Mg) have on citrus fruit?

Magnesium plays an important role in photosynthesis, as an enzyme activator, and aiding carbohydrate movement from leaves to other parts of the tree. It has also been shown to increase fruit size and weight. Seeds in citrus store heavy amounts of magnesium and these varieties may require additional Mg versus seedless ones.

Deficiency of magnesium is referred to as "bronzing" and typically begins to show up in the summer as Mg moves from the leaves to the fruit. Visual symptoms at first will be yellow blotches along the midribs on leaves closest to the fruit. Over time almost the entire leaf may turn yellow and form an inverted V before dropping from the tree during periods of drought, cold, etc.

Deficiencies of magnesium will be most prevalent on sandy, acidic soils or where excessive potassium and calcium in the soil is outcompeting magnesium. Intrepid Trio is the perfect product to supply citrus with needed magnesium while still supplying immediately available low-chloride potassium and pH neutral sulfur as sulfates as well.

### Soil Testing Levels of Mg (lb/ac)

Low	Medium	High
<30	30-60	>60

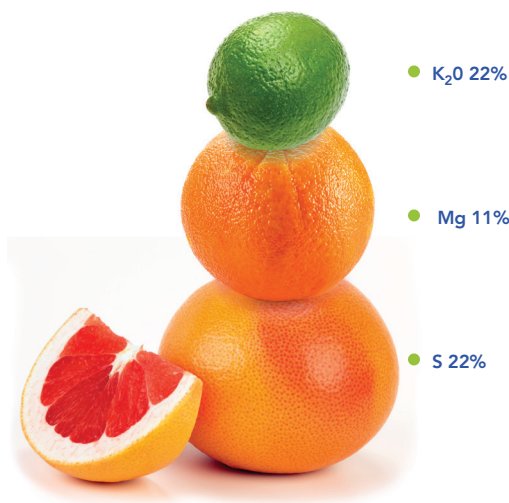
\*Mg fertilizer should be applied at a rate equal to 20% of the N rate on low testing Mg soils.  
(Univ. of Florida 2016)

### How does the sulfur (S) in Intrepid Trio® benefit citrus fruit?

Sulfur is an essential part of vitamins, hormones, and proteins within a plant. Sulfur and nitrogen uptake work hand in hand and high N fertilizer rates without sulfur will create an S deficiency. Intrepid Trio provides sulfur in the sulfate form which is immediately available to the tree and pH neutral causing no acidifying effect to the soil.

### When will Intrepid Trio® be available to the citrus fruit?

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



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



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