



Vegetables

Naturally Balanced Nutrition in Every Granule

Experience higher yields and balanced fertility in vegetables 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 1.0-3.0% 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.

When should Intrepid Trio® be applied?

Apply Intrepid Trio as part of a pre-plant fertilizer blend in preparation for vegetables seeding in the Fall or Spring. Split applications may be considered when broadcasting Intrepid Trio on deep sandy soils apt to leach.

Nutrient removal for vegetable crops

Crop	Yield/ac	N lb/ac	P ₂ O ₅ lb/ac	K ₂ O lb/ac	Mg lb/ac	S lb/ac
Cucumbers	10 tons	90	28	174	25	-
Watermelon	6 tons	50	14	89	13	-
Onions	12 tons	28	12	25	1	11
Sweet Potatoes	500 Bu	67	58	160	7	10
Squash	10 tons	32	12	56	-	-
Sweet Corn	5 tons	140	47	136	20	11

(Source: Nutrient Removal by Crops in North Carolina)



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



INTREPID
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Potassium's positive effects on vegetables...

- Increased shipping quality
- Increased yield and fruit size
- Longer shelf life
- Improved fruit color
- Improved soluble solid concentrations

How does potassium (K₂O) affect vegetables?

Vegetable crops such as cucumbers, sweet potatoes, sweet corn, and melons all remove significant amounts of potassium from the soil. Potassium serves as a regulator nutrient that aids in photosynthesis, improves water use efficiency of the plant through regulation of stomatal openings, and helps the plant resist disease and pests.

Deficiency symptoms first appear on the older leaves as K is mobile within the plant. There will be a yellowing or scorching along the leaf margin. If conditions become severe the chlorotic areas will become necrotic and leaves will dry up and die. Many vegetable crops are also sensitive to high fertilizer salts that can negatively impact yield and quality. Intrepid Trio is the ideal product for vegetables as it supplies immediately available potassium in a fertilizer containing less than 1.0-3.0% chloride depending on grade.

Salt Tolerance of Vegetable Crops

Crop	Max. Soil Salinity without yield loss (dS/m)	% Decrease in yields at soil salinities above threshold (% per dS/M)
Onion	1.2	16
Carrot	1	14
Turnip	0.9	9
Lettuce	1.3	13
Sweet Potato	1.5	11
Pepper	1.5	11
Cucumber	2.5	13

(Source: Maas 1984)

What effect does magnesium (Mg) have on vegetables?

Magnesium plays an important role in photosynthesis as the center of the chlorophyll molecule and acts in enzyme reactions forming proteins, and aiding the plant in the manufacture of energy.

Deficiencies of magnesium in vegetables can cause reduction in growth and are most common on sandy, acidic soils. The symptoms will appear first on the older leaves as yellow or white areas between the veins. Additionally, high rates of K fertilizer without an Mg source can induce a deficiency so applying a balanced fertilizer like Intrepid Trio that has K, Mg, and S in each granule will keep your vegetable field balanced with the nutrients it needs to continue to produce high quality vegetables.

How does the sulfur (S) in Intrepid Trio® benefit vegetables?

Sulfur is an essential part of vitamins, hormones, and proteins within a plant. Sulfur and nitrogen uptake work hand in hand, and as a result, nitrogen use efficiency is a key benefit of sulfur application to a vegetable crop. Intrepid Trio provides sulfur in the sulfate form that is immediately available to the plant and pH neutral causing no acidifying effect to the soil.

When will Intrepid Trio® be available to vegetables?

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.



- K₂O 22%
- Mg 11%
- S 22%

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



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