

Pacific Northwest Research Shows:



Supplies Apples with K and Mg in the Correct Balance



Results from a recent three-year study on improved apple cultivars in the Pacific Northwest illustrated that K-Mag helps:

- Improve leaf tissue potassium concentration
- Increase soil potassium levels
- Maintain leaf magnesium levels
- Increase soil magnesium levels
- Increase apple fruit size
- Promote higher fruit acidity
- Decrease incidence of the disease

The study's objective was to identify nutrient levels at which a positive plant response occurs in apple trees. Twelve orchards consisting of Fuji or Spartan cultivars were selected. Soil test levels varied, as did management practices. The grower's standard nutrient application was applied, but in addition, three common treatments were applied to all orchards:

1. Control. No additional fertilizer - grower's practices only.
2. 107 lbs K₂O as K-Mag (included 107 lbs S and 53.5 lbs Mg, all in the sulfate form)
3. 214 lbs K₂O as K-Mag (included 214 lbs S and 107 lbs Mg, all in the sulfate form)

The Results:

In both Fuji and Spartan cultivars, leaf tissue potassium, soil potassium and soil magnesium increased with higher K-Mag levels (Table 1). Additionally, leaf tissue magnesium was maintained, indicating that K-Mag helps supply potassium and magnesium — nutrients with an antagonistic relationship — in the proper balance.

Improved apple cultivars, such as Fuji and Spartan, respond to soil available K and Mg. K-Mag helps supply these essential nutrients in a balanced, water-soluble low-chloride, highly-available sulfate form.

If your apple crop needs a boost in yield and quality, it may be time to consider adding K-Mag to your balanced fertilization program. **Talk to your fertilizer dealer to learn more about how a K-Mag program can deliver the potassium, magnesium and sulfur requirements in a water-soluble sulfate form that's readily available to your crop.**

Table 1. K-Mag Increases the Available Nutrients to Fuji and Spartan Cultivars

	Fuji Leaf K	Spartan Leaf K	Fuji Leaf Mg	Spartan Leaf Mg	Fuji Soil K	Spartan Soil K	Fuji Soil Mg	Spartan Soil Mg
Control	1.44	1.30	0.29	0.36	0.31	0.36	0.39	0.37
107 K from K-Mag	1.56	1.46	0.29	0.35	0.43	0.46	0.51	0.52
214 K from K-Mag	1.61	1.53	0.29	0.36	0.61	0.52	0.73	0.63
Result	Increased	Increased	Maintained	Maintained	Increased	Increased	Increased	Increased

Data collected by orchard field personnel; samples analyzed by the AgriFood Canada Research Station.