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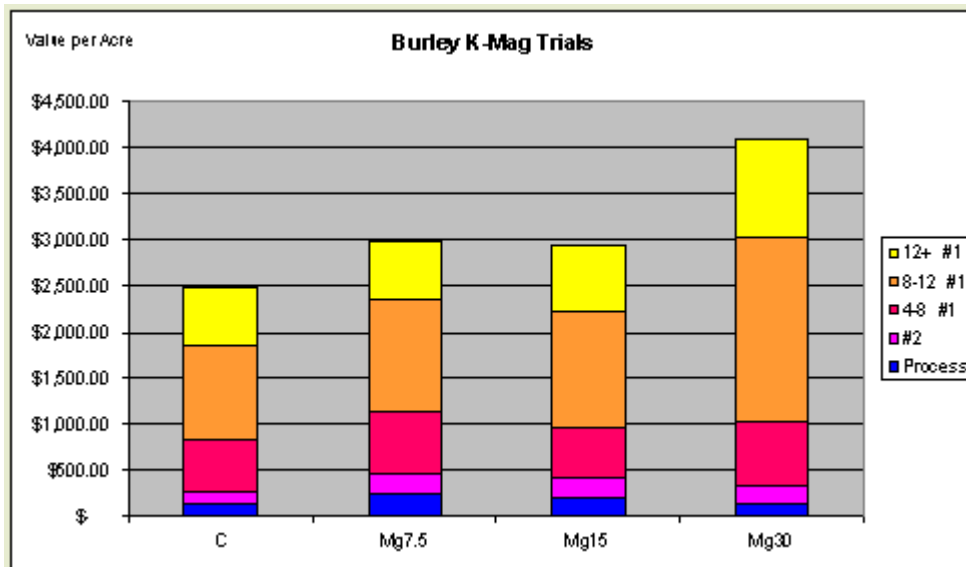
Potatoes Respond to K-Mag in Quebec (2001)

- K-Mag boosted total potato yield.
- K-Mag increased percentage of large potatoes.
- K-Mag improved drought resistance.

Research in North America has demonstrated that potato growers can significantly increase yields - including increased yields of higher quality potatoes - by applying about 300 lbs/acre of K-Mag fertilizer, depending on soil test results.

A double sulfate of potassium and magnesium, K-Mag combines 21.5% K₂O, 21% S and 10.5% Mg in a highly soluble low-chloride form. K-Mag helps meet the crop's magnesium and sulfur needs, and part of its potassium needs, so optimal yields and quality can be achieved.

As illustrated in the following chart, increased magnesium from K-Mag applications has been shown to greatly improve quality, and hence, profitability in Idaho.



But, does this data apply to potato production in Quebec?

In 2001, a research project was initiated to determine whether K-Mag applications would increase yield and quality of Quebec-grown potatoes.

Five field investigations were conducted in the potato-growing region of Quebec. To test response to water-soluble magnesium, each trial compared the yield of potatoes grown without magnesium to yields achieved with added magnesium from K-Mag.

Results

The first year of data (2001) indicates that water-soluble magnesium from K-Mag improves both yield and quality of fresh market potatoes in Quebec.

Each of the investigations showed a marked increase in marketable yield. The water-soluble magnesium alone boosted the marketable yield by 10-44 cwt per acre (Figure 2).

Soil test magnesium levels in these trials ranged from 133 to 220 lbs/acre Mg.

Figure 2. Marketable Yield of Potatoes (cwt/acre)

	Control	K-Mag	Increase From K-Mag
Chaleur, Lanoraie, Irrigated	372	388	16
Cheiftain, Lanoraie, Irrigated	460	470	10
Cheiftain, St Amable	198	242	44
Andover, Orleans Island	200	218	18
Ermosa, Orleans Island	198	242	44

K-Mag With Water-Soluble Magnesium Increased Marketable

In the Andover/Orleans Island trial, water-soluble magnesium from K-Mag increased marketable yield by 18 cwt/acre (9% increase) even when 1.5 tons/acre of dolomite was applied.

St. Amable and Orleans Island trials were not irrigated and yields were reduced due to drought conditions in 2001. Still, water-soluble magnesium from K-Mag increased yields 18-44 cwt./acre.

Conclusion

Findings from these five field investigations strongly indicate that Quebec potato producers have a significant opportunity to increase potato quality and yields, as well as profits, by incorporating K-Mag into a balanced fertility program. With marketable yields increasing by 10-44 cwt per acre, even in areas where dolomite was applied, it is clear that K-Mag provides the balanced nutrition that potatoes grown on Quebec soils need to achieve their genetic potential.

Recommendation

For potatoes in Quebec, apply 300-400 lb/acre of K-Mag to supply 30-40 lb/a of water-soluble magnesium for increased yield, quality, and profits.



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