



Polysulphate
Trial

Potato
(*Solanum tuberosum* cv.
Russet Burbank) on sandy
loam soil

Polysulphate fertilizer is a soluble, easily-absorbed, cost-effective answer to crop nutrition, containing four key plant nutrients: sulphur, potassium, magnesium and calcium.

S 48% SO₃
(19.2% S)

K 14% K₂O
(11.6% K)

Mg 6% MgO
(3.6% Mg)

Ca 17% CaO
(12.2% Ca)



When

- Planting:
May 15, 2018
- Harvest:
October 4, 2018



Where

Wisconsin, USA



Crop

Potato
(*Solanum tuberosum*)
cv. Russet Burbank



Soil type

Acidic, loamy sand soil



Measurements

- Yield
- Quality



Objective

To evaluate Polysulphate as a substitute potassium, calcium, and sulphur from muriate of potash and gypsum in conventional practice, for potato 'Russet Burbank' grown in central Wisconsin.

Treatments

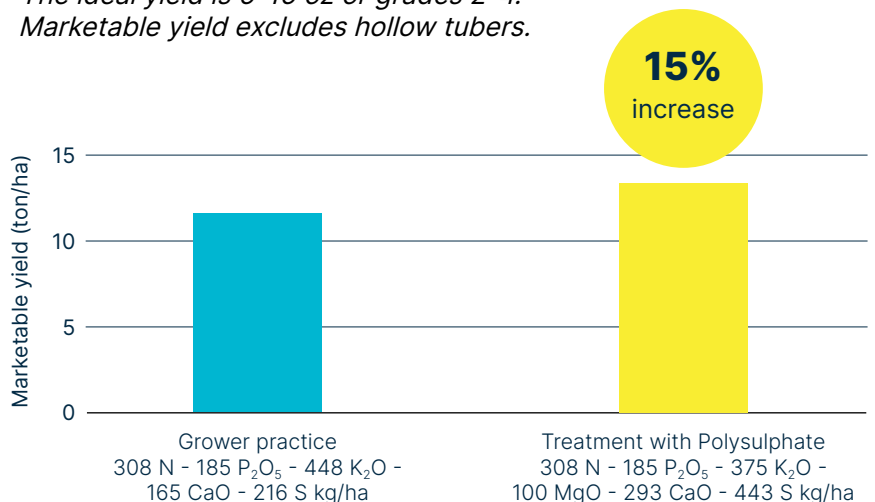
Grower practice consists of 37 kg N/ha applied at planting as DAP. At emergence and active growth, 85 and 190 kg N/ha was applied, respectively as ammonium sulphate and ammonium nitrate. Phosphorus, derived from DAP, was applied at 185 kg P₂O₅/ha at planting. Potassium was applied pre-plant at 310 kg K₂O/ha as MOP, and at 135 kg K₂O/ha as SOP at planting. In addition, at pre-plant gypsum was applied at 560 kg/ha.

The Polysulphate treatment was a duplicate of the grower practice without the pre-plant MOP and gypsum. Instead, Polysulphate was applied at 1,680 kg/ha at pre-plant.

Results

- Polysulphate fertilization increased the marketable ideal* yield by 1.79 ton/ha over conventional grower practice.
- Marketable yield increased by 15% with the addition of Polysulphate.

* The ideal yield is 6-16 oz or grades 2-4.
Marketable yield excludes hollow tubers.



Mined in the UK, ICL is the first – and only – producer in the world to mine polyhalite, marketed as Polysulphate.



- ✉ fertilizers.sales@icl-group.com
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